THE STATE OF
SMALL AND
MEDIUM-SIZED

BUSINESS
IN QUÉBEC

REPORT
BY THE MINISTRE
DÉLÉGUÉ AUX PME
1987

Québec

Gouvernement du Quebec
Ministère de l'Industrie
et du Commerce
Published by the
Direction des communications

Copyright, 1st quarter 1988
Bibliothèque nationale du Québec.
ISBN 2-550-18283-9

© Government of Quebec, 1987

Preface

The purpose of the first edition of "The State of Small and Medium-Sized Business in Quebec" was to determine the importance of small and medium-sized business to the economic and social life of Quebec; this purpose was fulfilled. In fact, the publication proved a valuable source of information for the various groups concerned with small and medium-sized businesses and their environment.

The 1987 edition has been written with the same aim in mind, but it also takes into account the remarks expressed during the many consultations with business associations and groups, financial reporters, and experts on the development of small and medium-sized business.

In addition to statistics on the performance of our small and medium-sized businesses, the reader is being treated this year to a series of articles that provide additional information on a variety of topics, including legislation, the transfer of technology, franchising, and exporting.

Finally, I would like to thank all those who contributed to the 1987 edition:

Management:
  Marcel Pelletier, sous-ministre adjoint à l'administration et à la planification

  Michel Bussière, directeur général de la recherche et de la planification

Editorial Staff:
  Richard Roy, directeur des études sectorielles
  Sylvain Boucher
  André Chouinard
  Sylvie Miguel
  François Murray
  Georges Roberge
  Jules Roy

Contributors:
  André Archer, professor at the Université du Québec à Trois-Rivières
  Yves Descôteaux, attorney and economist, consultant
  Julien Naud, research assistant at Université Laval
  Ghislain Théberge, visiting professor at Université Laval.

Word processing, data processing, text editing and electronic layout:
  Serge Boutin
  Jacqueline Côté
  Michel Guénard
  François Grenier
  Danielle Lavoie
  Jacques Savard
  Denis Simard

For the English version:

  Translation:
    Domville O'Donoughue Inc., Montreal

  Editing:
    André Chouinard

  Electronic layout:
    Serge Boutin

André Vallerand
ministre délégué aux PME

Table of Contents

Preface .... *iii*

Table of Contents .... *v*

List of Tables .... *xi*

List of Graphs .... *xxiv*

Introduction **1**

Chapter 1 — Small and Medium-Sized Business (SMB) and the Legislative Framework **3**

1.1 Introduction 3
1.2 Laws that have a direct effect on the corporate tax burden or indirect effects due to the paperwork involved in the regulations 5
1.2.1 Provincial Laws 5
1.2.2 Federal Laws 10
1.3 Laws that Restrict Access to a Sector 11
1.3.1 Provincial Laws 11
1.3.2 Federal Laws 15
1.4 Laws Favourable to Small and Medium-Sized Business (SMB) 16
1.4.1 Provincial Laws 16
1.4.2 Federal Laws 20
1.5 Conclusion 21

Chapter 2 — The Adaptability of Small and Medium-Sized Business (SMB) to Economic Cycles **23**

2.1 Definition and Dating of Economic Cycles 23
2.1.1 Definition 23
2.1.2 Dating Economic Cycles in Canada 23
2.1.3 Causes of Recession 25
2.2 Analysis of Employment During Periods of Recession and Growth . 26
2.2.1 General Situation 27
2.2.2 Sectorial Development 34
2.3 Fluctuations in Employment by Size and Life Cycle of the Company 38
2.3.1 Evolution in a Recession Phase 38
2.3.2 Evolution in an Expansion Phase 40
2.4 Conclusion 43

Chapter 3 — Worker Participation in Quebec Business 47
3.1 Participation in Corporations 47
3.1.1 General Outline 47
3.1.1.1 The Facts 47
3.1.1.2 The Constraints on Participation 49
3.1.1.3 Recommendations 50
3.1.2 The Faces of Participation 51
3.1.2.1 Management 51
3.1.2.2 Results 52
3.1.2.3 Ownership 54
3.1.3 Participation in Management 54
3.1.3.1 Overall Evaluation 55
3.1.3.2 Various Formulas 57
3.1.4 Industrial Democracy 60
3.1.4.1 Overall Evaluation 60
3.1.4.2 Management Trends 62
3.2 Participation in Cooperative Businesses 66

Chapter 4 — Small and Medium-Sized Business and the Transfer of Technology 71
4.1 The Transfer of Technology 73
4.1.2 Words Shrouded in Mystery? 73
4.1.3 A Definition 73
4.1.4 "Push" and "Pull" Transfers 75
4.1.5 Types of Transfer 75
4.1.6 Organizing Information Needs 76
4.1.6.1 Inside and Outside the Company 76
4.1.6.2 The Information Broker 78
4.1.6.3 Industrial Fairs, Exhibitions and Trade Missions 78
4.1.7 Purchasing Technology 80
4.1.8 Partners in the Transfer of Technology 81
4.2 Steps Involved in the Transfer of Technology 82
4.3 Technological Evaluation of Small and Medium-Sized Business in Quebec 85
4.3.1 R&D Ensures the Vitality of Companies 85
4.3.2 The Transfer of Technology: The Link Between Small and Medium-Sized Business and Big Business 91
4.4 The Impact of the Transfer of Technology on Human Resources ... 93
4.4.1 A Question of Attitudes 93
4.4.2 Employee Participation 93
4.4.3 Individual Background and Organizational Culture Oriented Towards Technology 94

4.5 Patents and Manufacturing Under License 95
4.5.1 Definitions 95
4.5.2 Knowledge Available to Everyone 96
4.5.3 Limits of Protection Afforded By Patents 97
4.5.4 How to Benefit from Your Innovations Before They Are Copied? .. 97
4.5.5 Royalties 99
4.6 Technology of Transfer: A Challenge for the Small And Medium-Sized Business 99
4.6.1 A Major Challenge for SMB in Quebec 100
4.6.2 Assign Priority to the Development of Human Resources 100
4.6.3 Make Maximum Use of Technological Information 101
4.6.4 Increase Flexibility To the Maximum 101

Chapter 5 — Small and Medium-Sized Business and Franchising 103
5.1 Nature and Importance of Franchises 104
5.1.1 The Economic Importance of Franchising 104
5.1.2 What is a Franchise? 107
5.1.3 The Different Types of Franchises 108
5.1.4 A Little History 108
5.2 Advantages and Disadvantages of Franchising 109
5.2.1 Advantages to the Franchisee 110
5.2.1.1 Easy Start-Up 110
5.2.1.2 Transfer of Know-How 110
5.2.1.3 Initial and Continuing Training 110
5.2.1.4 National and Local Advertising 110
5.2.1.5 Better Credit Rating 111
5.2.1.6 Purchasing of Goods and Services at a Lower Cost 111
5.2.1.7 Research and Development Program 111
5.2.1.8 Synergistic Effects 111
5.2.1.9 Reduced Risk of Bankruptcy 111
5.2.2 Disadvantages to the Franchisee 113
5.2.2.1 The Cost 113
5.2.2.2 Mandatory Compliance with All Clauses 113
5.2.2.3 Restrictive Physical Requirements 113
5.2.2.4 Effacement of the Franchisee 113
5.2.2.5 Inequality of Franchisee-Franchiser Relationship 113
5.2.3 Advantages to the Franchiser 114
5.2.4 Disadvantages to the Franchiser 114
5.3 The Success of the Franchising Formula 114
5.4 Factors to Consider Before Buying a Franchise 115
5.4.1 The Franchiser 117
5.4.2 Franchise Costs and the Income 117

5.4.3 The Product or Service 118
5.4.4 Legal Aspects and Contracts 118
5.4.5 Location and Territorial Exclusivity 119
5.4.6 Franchisee Selection Criteria 119
5.5 Sources of Information on Franchises 119
5.5.1 The Dailies 119
5.5.2 Business Publications 120
5.5.3 Trade Publications 120
5.5.4 Franchiser Associations 120
5.5.5 Conventions, Trade Shows, Exhibitions, Conferences, Etc. 120
5.5.6 Banks and Financial Institutions 121
5.5.7 Franchising Professionals 121
5.6 The Legal Framework for Franchises in Quebec 121
5.6.1 Governing Without Legislating 121
5.6.1.1 A "Business" Contract 122
5.6.1.2 As Many Clauses as Necessary 124
5.6.1.3 The Weight of the Franchiser 124
5.6.1.4 In the Event of Disagreement 125
5.6.2 Support on Several Fronts 126
5.6.2.1 Federal Standards 126
5.6.2.2 Standards in Quebec 126
5.6.3 Support for Franchising 126
5.6.3.1 Regulatory Levels 127
5.6.3.2 "Regulations" in Action 129
5.6.4 Quebec: The Exception or the Rule 130
5.7 Conclusion 131

Chapter 6 — The Penetration of Data Processing in Small and Medium-Sized Business in Quebec. 133
6.1 Definition of the Computerization of Business 134
6.2 The Computerization of Small, Medium-Sized and Large Companies in Quebec 135
6.2.1 Percentage of Companies with Computer Equipment 136
6.2.2 Data Processing Applications in Quebec Businesses 137
6.2.3 Current and Projected Investments in Computer Equipment 140
6.2.4 Computerization Rate of Quebec Companies 142
6.3 Computerization of the Manufacturing Sector: Industrial Automation 144
6.3.1 Industrial Automation in Canada 144
6.3.2 Automation of the Machinery and Metalworking Sector in Quebec 150
6.3.2.1 Penetration of Data Processing Technologies in Sector Businesses 150
6.3.2.2 Distribution of Digital Control Machine Tools in the Sector 153

6.4 Incentive and Obstacles to the Automation of Business 159
6.4.1 Grounds for Innovation 159
6.4.2 Obstacles to Innovation 161
6.4.3 Some Results of Automation 161
6.5 A Few Comparisons with International Markets 162
6.5.1 Computerization of Business 163
6.5.2 Penetration of Digital Control Machine Tools (DCMT) in Quebec and Canada 164
6.5.2.1 Growth of the Canadian Fleet of DCMT Since 1974 164
6.5.2.2 Breakdown of DCMT According to Sector of Activity and Size of Company 166
6.5.3 Robotization in Quebec and Canada 168
6.5.4 Analysis of Comparisons 170
6.6 Conclusion 172

Chapter 7 – Small and Medium-Sized Business and Exports 175
7.1 International Trade in Canada and Quebec 176
7.1.1 International Trade in Canada 176
7.1.2 International Trade in Quebec 178
7.1.3 Performance of Small and Medium-Sized Business (SMB) on the International Market 182
7.2 Quebec's International Services 188
7.2.1 A Network of International Services 189
7.2.2 The Economic Role of Quebec's International Services 189
7.2.2.1 Latin America 189
7.2.2.2 Asia and the South Pacific 190
7.2.2.3 The United States 190
7.2.2.4 Europe 191
7.3 Government Export Assistance Programs 192
7.3.1 Assistance Programs Available through the Ministère du Commerce extérieur et du Développement technologique du Québec 192
7.3.1.1 Courses and Seminars on External Trade 192
7.3.1.2 Comex-50 192
7.3.1.3 APEX-Prospection 193
7.3.1.4 APEX-Marketing 195
7.3.1.5 ACTIM-MCEDT 197
7.3.1.6 Invitation to Foreign Buyers 198
7.3.1.7 Trade Shows and Exhibitions Outside Quebec 198
7.3.1.8 Missions Outside Quebec 198
7.3.2 The Société de développement industriel (SDI) Export Assistance Program 199

7.3.2.1 Part I: The Identification and Establishment on New Markets 200
7.3.2.2 Part II: The Financing of Exports 201
7.3.2.3 Part III: Creating Consortiums 202
7.3.3 The Federal Government's Export Market Development Program 202
7.3.4 The Export Development Corporation Programs 203
7.4 Conclusion 203

Chapter 8 – Small and Medium-Sized Business in Words and Numbers 205
8.1 The General Context 205
8.1.1 The Economic Environment 205
8.1.2 Institutional Factors 206
8.1.3 Nature of SMB 208
8.2 The Economic Importance of Small and Medium-Sized Business .. 211
8.2.1 The Relative Weight of SMB in the Economy 211
8.2.2 SMB in the Manufacturing Sector 222
8.2.3 Demographic Profile of SMB Employees 226
8.2.4 Self-Employed Workers 228
8.2.5 Cooperatives 232
8.3 Growth of SMB 233
8.3.1 Trends 233
8.3.2 Performance Indexes 237
8.3.3 Developments 239
8.4 Statistical Supplement 243

Appendix 1 – Growth Rate of Actual GDP and Employment, Canada 283
Appendix 2 – Growth Rate of Actual GDP and Employment, Quebec 284
Appendix 3 – Fluctuations in Total Employment by Size of Business, All Sectors Except Public Service, Canada, 1982 and 1983, 1983 and 1984 285
Appendix 4 – Wage Scale According to Size of Company and by Manufacturing Industry For the Manufacturing Industry in Quebec, 1982 and 1984 287
Appendix 5 – List of Bureaux and Délégations du Québec 288
Appendix 6 – Useful Telephone Numbers and Addresses 293
Appendix 7 – Conférence PME - May 28, 1987 – Summary 297

Other Bibliographical References 305

List of Tables

Table 2.1
Actual Gross Domestic Product in Terms of Expenses, at 1981 Prices
By Quarter, Deseasonalized
Canada, 1961 to 1986 24

Table 2.2
Employment and Employment Fluctuations
Small and Medium-Sized Business (SMB) and Big Business
Quebec, 1978 to 1985 28

Table 2.3
Employment Fluctuations by Size of Company
All Sectors Except Public Service
Quebec, 1978 to 1985 30

Table 2.4
Employment and Employment Fluctuations
Small and Medium-Sized Business (SMB) and Big Business
Quebec, 1978 to 1985 32

Table 2.5
Employment Fluctuations by Size of Company
All Sectors Except Public Service
Canada, 1978 to 1985 33

Table 2.6
Employment Fluctuations During Recession and Expansion Phases
Small and Medium-Sized Business (SMB) and Big Business
Quebec and Canada 35

Table 2.7
Fluctuations in Total Employment by Size of Company
All Sectors Except Public Service
Quebec, 1981 and 1982 39

Table 2.8
Fluctuations in Total Employment by Size of Company
All Sectors Except Public Service
Canada, 1981 and 1982 41

Table 2.9
Fluctuations in Total Employment by Size of Company
All Sectors Except Public Service
Quebec, 1982 and 1983 42

Table 2.10
Fluctuations in Total Employment by Size of Company
All Sectors Except Public Service
Quebec, 1983 and 1984 44

Table 3.1
Types and Methods of Participation 53

Table 3.2
Breakdown of the Number of Cases Examined
According to Mechanisms for Participation in Management 55

Table 3.3
Classification of Management Innovations - INP - HEC Research 56

Table 3.4
Breakdown of Participative Companies Subsidized by the PECEC,
According to Area, Sector of Economic Activity, Size, Intensity,
and Form of Participation (1979-1983) 61

Table 3.5
Overall Evaluation of the Impact of Co-Management 62

Table 3.6
Descriptive Aspects of Each of the Generations of Co-Managed Companies 64

Table 4.1
The Status of Technological Transfer in a General Context 72

Table 4.2
Definition of Transfer of Technology 74

Table 4.3
Government Assistance Preferred by Owners/Managers of
Small and Medium-Sized Businesses (SMB) 78

Table 4.4
Sources of Information on the Transfer of Technology 83

Table 4.5
Steps to Innovation 84

Table 4.6
Stages in the Transfer of Technology 86

Table 4.7
Intensity of R&D According to Company Size and
Controlling Interest 90

Table 5.1
Growth of the Franchise Industry
United States
1985 - 1990 132

Table 6.1
Data Processing Applications in Business
(partial list) 135

Table 6.2
Percentage of Companies That Own Computer Equipment
According to Size and Sector of Activity
Quebec, 1985 137

Table 6.3
Percentage of Companies That Have Already Introduced
Data Processing Applications
According to Type of Application, Company Size and Sector of Activity
Quebec, 1985 138

Table 6.4
Percentage of Companies Planning to Introduce
Data Processing Applications
According to Type of Application, Company Size and Sector of Activity
Quebec, 1985 139

Table 6.5
Average Value of Existing and Planned Computer Equipment
According to Company Size and Sector of Activity
Quebec, 1985 141

Table 6.6
Rate of Computerization of Companies, According
to Size and Sector of Activity
Quebec, 1985 143

Table 6.7
Technological Applications, Current and Projected
by All Types of Businesses
Canada, 1986 145

Table 6.8
Introduction of New Data Processing Technologies,
by Manufacturing Industry
Canada, 1980-1985 147

Table 6.9
Machinery and Metalworking Sector
Use of Data Processing in Business Management
and Production
According to Size and Major Group
Quebec, 1985 151

Table 6.10
Machinery and Metalworking Sector
Use of Data Processing in Business
Management and/or Production
According to Major Group
Quebec, 1985 152

Table 6.11
Machinery and Metalworking Sector
Distribution of Digital Control Machine Tools
By Economic Sector
Quebec, 1985 153

Table 6.12
Machinery and Metalworking Sector
Distribution of Digital Control Machine Tools
According to Ownership of Companies
Quebec, 1985 154

Table 6.13
Machinery and Metalworking Sector
Distribution of Digital Control Machine Tools
According to Size of Business and Major Group
Quebec, 1985 155

Table 6.14
Machinery and Metalworking Sector
Concentration of Digital Control Machine Tool Fleet
According to Size of Business
Quebec, 1985 157

Table 6.15
Machinery and Metalworking Sector
Concentration of Digital Control Machine Tool Fleet
According to Economic Sector
Quebec, 1985 158

Table 6.16
Machinery and Metalworking Sector
According to Whether Digital Control Machine Tools
Are Used or Not
Ontario, 1984 162

Table 6.17
Digital Control Machine Tools
Growth of DCMT Fleet
Canada, Ontario, Quebec
1974-1984 165

Table 6.18
Use of Digital Control Machine Tools
Major Industrialized Nations, 1983 166

Table 6.19
Digital Control Machine Tools
Distribution of DCMT Fleet and Rate of Penetration of DCMT
By Economic Sector
Ontario and Quebec, 1974 and 1984 167

Table 6.20
Distribution of DCMT by Size of User Company
Ontario, Quebec, 1984 169

Table 6.21
International Comparison of Robot Utilization
Major Industrialized Nations
January 1, 1984 170

Table 7.1
Breakdown of Exports by Destination and of Imports
by Place of Origin
Canada, 1977-1986 177

Table 7.2
Breakdown of Exports by Product Type
Canada, 1977-1986 179

Table 7.3
Breakdown of Imports by Product Type
Canada, 1977-1986 180

Table 7.4
Value of Quebec's International Exports by Destination
1979-1986 181

Table 7.5
Value of Quebec's International Imports by Place of Origin
1979-1986 183

Table 7.6
Value of Quebec's International Exports of 25 Major Products
1984-1986 184

Table 7.7
Value of Quebec's International Imports of 25 Major Products
1984-1986 185

Table 7.8
Destination of Shipments by Exporting Manufacturers Classified as SMB
1982-1984 186

Table 7.9
Destination of Shipments by Exporting Manufacturers Classed as SMB
By Industrial Group,1982-1984 187

Table 8.1
Suggested Definition and Classification of Companies in the
Manufacturing Sector
By Number of Employees and Value of Assets
Quebec, 1987 209

Table 8.2
Suggested Definition and Classification of Companies in Sectors
Other Than Manufacturing
By Number of Employees and Annual Sales Volume
Quebec 209

Table 8.3
Number of Corporations
Annual Variation
According to Size and Sector of Activity
Quebec, 1986 to 1987........ 211

Table 8.4
Number of SMB and Large Companies
Breakdown (%) by Sector
Quebec, 1986 and 1987........ 212

Table 8.5
Number of SMB
Absolute and Relative Variations
By Administrative Region
Quebec, 1986 to 1987........ 213

Table 8.6
Corporate Income
Absolute and Relative Variations
According to Size and Sector of Activity
Quebec, 1983 to 1984 216

Table 8.7
Total Employment
Absolute and Relative Variations
According to Size of Business
Quebec, 1984 to 1985 220

Table 8.8
Total Employment
Breakdown by Sector of Activity
According to Size of Business
Quebec, 1984 and 1985 220

Table 8.9
Employees, Wages, Added Value and Value of Shipments by SMB
Breakdown
According to Major Manufacturing Industries
Quebec, 1984 and 1985 224

Table 8.10
Number and Income of Self-Employed Workers
Absolute and Relative Variations
Quebec, 1982 to 1985 229

Table 8.11
SMB According to Certain Variables
Absolute and Relative Variations
By Sector of Activity
Quebec
1983, 1984, 1985, 1986 and 1987 (if available) 234

Table 8.12
Total Number of Small and Medium-Sized Businesses (SMB)
and Active Corporations
Breakdown by Sector of Activity
Quebec, 1986 and 1987 245

Table 8.13
Number and Percentage of Active Corporations
Breakdown and Annual Variation According to Size and Sector of Activity
Quebec, 1986 and 1987 246

Table 8.14
Number of Active Corporations
Absolute and Relative Breakdown
According to Size and Sector of Activity
Quebec, 1986 and 1987 247

Table 8.15
Number of Active Corporations and Small and Medium-Sized Businesses (SMB)
Absolute and Relative Breakdown
According to Administrative Region
Quebec, 1986 and 1987 248

Table 8.16
Number of Active Corporations and Small and Medium-Sized Businesses (SMB)
Absolute and Relative Breakdown by Sector
According to Administrative Region
Quebec, 1987 249

Table 8.17
Small and Medium-Sized Businesses (SMB) Declaring Income Earned in Quebec
Number and Value of Income By Sector of Activity
Quebec, 1983 and 1984 250

Table 8.18
Active Corporations Declaring Income Earned in Quebec
Breakdown of Income by Amount and Percentage
According to Size and Sector of Activity
Quebec, 1983 and 1984 251

Table 8.19
Active Corporations Declaring Income Earned in Quebec
Breakdown by Number and Income
According to Size and Sector of Activity
Quebec, 1983 and 1984 252

Table 8.20
Number of Employees by Sector of Activity
According to Size of Business
Quebec, 1985 253

Table 8.21
Number of Employees by Sector of Activity
Breakdown in Percentage
According to Size of Business
Quebec, 1985 254

Table 8.22
Number of Employees by Size of Business
Breakdown in Percentage
According to Sector of Activity
Quebec, 1985 255

Table 8.23
Number of Employees by Size of Business
Breakdown According to Phases in the Life Cycle of Businesses
Quebec, 1978 to 1985 256

Table 8.24
Total Number of Employees
Annual Variations in Number and Percentage
By Size of Business
Quebec, 1978 to 1985 257

Table 8.25
Total Number of Employees
Annual Variations in Number and Percentage
By Sector of Activity
According to Size of Business
Quebec, 1984 to 1985 258

Table 8.26
Number of Employees by Sector of Activity
According to Size of Business
Canada, 1985 259

Table 8.27
Number of Employees by Sector of Activity
Breakdown by Percentage
According to Size of Business
Canada, 1985 260

Table 8.28
Number of Employees by Size of Business
Breakdown in Percentage
According to Sector of Activity
Canada, 1985 261

Table 8.29
Number of Employees by Size of Business
Breakdown According to Phases in Life Cycle of Businesses
Canada, 1978-1985 262

Table 8.30
Manufacturing SMB
Changes in Certain Variables
Quebec, 1982 to 1984 263

Table 8.31
Manufacturing SMB
Breakdown of Principal Variables
By Sector of Activity
Quebec, 1985 264

Table 8.32
Manufacturing SMB
Changes in Employment and Added Value
By Sector of Activity
Quebec, 1982 to 1985 265

Table 8.33
Manufacturing SMB
Changes in Principal Variables by Administrative Region
Quebec, 1982 to 1984 266

Table 8.34
Total Employment
Breakdown by Age Group
According to Size of Business
Quebec, 1984 269

Table 8.35
Employment of Young People (15 - 24 years) in
Small and Medium-Sized Businesses (SMB)
Breakdown by Sector of Activity
Quebec, 1984 270

Table 8.36
Total Employment
Breakdown by Size of Business
According to Sex
Quebec, 1984 271

Table 8.37
Employment of Women in SMB
Breakdown by Sector of Activity
Quebec, 1984 272

Table 8.38
Total Income of Self-Employed Workers
Breakdown According to Profession
Quebec, 1982 to 1985 273

Table 8.39
Self-Employed Workers
Breakdown According to Profession
By Administrative Region
Quebec, 1985 274

Table 8.40
Self-Employed Workers
Breakdown by Income Bracket
According to Profession
Quebec, 1983 to 1985 275

Table 8.41
Income of Self-Employed Workers
Breakdown by Income Bracket
According to Profession
Quebec, 1983 to 1985 276

Table 8.42
Self-Employed Workers
Breakdown by Profession
According to Age and Sex
Quebec, 1985 277

Table 8.43
Cooperative Businesses According to Certain Variables
Quebec 278

Table 8.44
Non-Financial Cooperatives According to Certain Variables
By Type of Cooperative
Quebec, 1985 279

Table 8.45
Number of Cooperatives
Breakdown by Type of Cooperative
According to Administrative Region
Quebec, 1987 280

List of Graphs

Graph 2.1
Growth Rate of the Actual GDP in Quebec and Canada 27

Graph 2.2
Growth Rate of the Actual GDP and of Employment
For All Sectors Except Public Service, Quebec,
From 1979 to 1985 29

Graph 2.3
Growth Rate of the Actual GDP and of Employment for all Sectors
Except Public Service, Canada, 1979 to 1985 31

Graph 2.4
Number of Jobs per Sector, Small and Medium-Sized Business
and Big Business,
1981-1985 37

Graph 5.1
Percentage of Retail Sales Realized by Franchises 105

Graph 5.2
Percentage of Canadian Franchises and Their Sales
Quebec and Ontario 105

Graph 5.3
Survival Rate: SMB and Franchises
First Ten Years of Existence 112

Graph 5.4
General Diagram of a Franchise Agreement 116

Graph 6.1
Technological Applications Introduced in the Manufacturing Sector
Canada, 1980-1985 146

Graph 6.2
Median Expenditures per Type of Innovation
Canada, 1980-1985 149

Graph 6.3
Percentage of Establishments Reporting Technological Changes
Connected with Data Processing, per Manufacturing Industry
Canada, 1980-1985 149

Graph 6.4
Grounds for Innovation in
Percentage of Total Innovation Projects
Canada, 1980-1985 159

Graph 6.5
Obstacles to Innovation
Percentage of Establishments Reporting Obstacles
Canada, 1980-1985 160

Graph 6.6
Regional Scope of Innovations
Percentage of Establishments Reporting Technological Changes
Connected with Data Processing
Canada, 1980-1985 163

Graph 8.1
Number of SMB
Breakdown in Percentage
By Sector of Activity
Quebec, 1987 214

Graph 8.2
Number of SMB
Breakdown by Sector of Activity
According to Administrative Region
Quebec, 1987 215

Graph 8.3
Income Earned by SMB
Annual Variation
According to Sector of Activity
Quebec, 1983 to 1984 218

Graph 8.4
Total Employment
Breakdown in Percentage
According to Size of Business
Quebec, 1985 221

Graph 8.5
Employment in SMB
Breakdown in Percentage
According to Sector of Activity
Quebec, 1985 221

Graph 8.6
Total Employment
Net Variations by Size of Business
According to Sector of Activity
Quebec, 1978 to 1985 223

Graph 8.7
Employment in Manufacturing SMB
Breakdown in Percentage
According to Administrative Region
Quebec, 1984 225

Graph 8.8
Manufacturing SMB
Relative Proportion of Overall Manufacturing Sector
According to Administrative Region
Quebec, 1984 225

Graph 8.9
Total Employment
Percentage of Jobs Held by Young People (ages 15 to 24)
According to Size of Business
Quebec, 1984 227

Graph 8.10
Number and Total Income of Self-Employed Workers
Breakdown in Percentage
According to Profession
Quebec, 1985 230

Graph 8.11
Self-Employed Workers
Breakdown in Percentage
By Administrative Region
Quebec, 1985 231

Graph 8.12
Self-Employed Workers
Breakdown in Percentage
By Age and By Sex
Quebec, 1985 231

Graph 8.13
SMB in the Primary and Secondary Sectors
Relative Proportions of Employment and Income
By Sector of Activity
Quebec, 1984 and 1985 235

Graph 8.14
SMB in the Tertiary Sector
Relative Proportions of Employment and Income
By Sector of Activity
Quebec, 1984 and 1985 236

Graph 8.15
SMB Performance Indexes (1980 = 100)
Quebec, 1980 to 1986 238

Introduction

"The State of Small and Medium-Sized Business in Quebec", aside from defining small and medium-sized business as economic agents and outlining their strategic role in the growth of the economy, also underscored the high mortality rate observed in this category of business. Numerous companies make their appearance each year but a very large number of them are forced to close down.

We have yet to pinpoint all the causes of the disappearance of businesses. All too often, rather than analyzing the underlying reasons for these failures, we wind up with the simple diagnosis of "poor management"; and then, "reassured" by this reason, we can forget... However, while this diagnosis is general enough to cover a whole range of reasons, it is too general to enable us to suggest any specific remedies.

We also established that the high mortality rate of SMB is not specific to Quebec. Small consolation, however, especially since the number of bankruptcies has been higher in Quebec than it has in Ontario in recent years, even though the latter province has more companies.

In any case, this book is not a thorough analysis of the various causes of the phenomenon, since this would require lengthy studies and surveys that have yet to be carried out. However it has become obvious that a large number of companies have disappeared as a result of bankruptcies or closures, because the owners or managers were insufficiently or poorly informed.

Our intention is therefore to make this report a source of both statistical and documentary information that will prevent some failures by providing entrepreneurs with, for instance, an opportunity to benefit from the experience of others.

The theme of the report is therefore along the lines of "Information – Prevention" and the articles and statistics tend to gravitate towards these two poles. The first seven chapters are articles that provide information on aspects that entrepreneurs should be familiar with, namely the start-up of a company and the developmental phase.

The first chapter entitled "Small and Medium-Sized Business (SMB) and the Legislative Framework" is an examination of the laws and regulations that govern small and medium-sized business (SMB), and rates them according to whether they are favourable to SMB or not.

The second chapter shows, among other things, how small and medium-sized business (SMB) are much better equipped than big business to withstand the fluctuations of the economy, by analyzing their performance during the various stages of the last economic recession. The next chapter, on worker participation, is condensed from a study prepared by the Beaudry Commission and describes the various types of worker participation encountered in Quebec, as well as their degree of success.

The chapter on the transfer of technology is, first of all, an attempt to demystify this somewhat abstract notion; it shows how the transfer of technology can easily be used by small and medium-sized business (SMB), while also pointing out the pitfalls. The same can be said for the chapter on franchising, which outlines the advantages of this formula without however presenting it as either infallible or a general panacea.

The chapter entitled "The Penetration of Data Processing in Small and Medium-Sized Business in Quebec" tracks the penetration of data processing in Quebec's economy, in comparison to Ontario, Canada and other countries, and identifies the sectors with the highest concentration of data processing.

Another chapter, "Small and Medium-Sized Business and Exports", discusses the scope and nature of Quebec's export trade, and describes the services available to small and medium-sized business in this respect, as well as the role played by the délégations du Québec around the world.

In the last chapter, entitled "Small and Medium-Sized Business in Words and Numbers", last year's statistics have been updated and, wherever possible, supplemented.

Chapter 1

Small and Medium-Sized Business (SMB) and the Legislative Framework

1.1. - Introduction

Since World War Two, the Western governments – including Quebec – have systematically intervened in the economic field in order to achieve objectives otherwise impossible to attain given the free interplay of market factors. In order to ensure more effective use of limited resources, this intervention, which took the form of laws and regulations, was aimed at modifying or defining the manner in which private and public enterprises conduct business and make decisions. The purpose of the many laws and regulations that have since been passed has been to:

- ensure more equitable distribution of the national product among the factors of production;
- protect the environment, the consumers and the workers by determining what companies may or may not do with respect to practices inherent in the production of goods and services;
- prevent what is known as "self-destructive competition" which causes enormous fluctuations in production and price, deterioration of the quality of the products marketed, and a waste of public resources;
- establish essential services at a relatively low cost for all consumers, wherever they live;
- force natural monopolies to reduce their excessive profit and their prices and keep production to a level compatible with these aims.

More specifically, laws attempt to regulate some of the trouble spots in the economy, such as access to the sector, the size of companies, product differentiation and quality, cost determining and price setting, forms of advertising, conglomerate, vertical and horizontal mergers, consumer protection, environmental protection, occupational health and safety, accounting practices, capital cost allowance, etc.

Although most regulations are justified, given that they correct market imperfections, their impact on the activity of some economic sectors can be far more costly than beneficial. In fact, designed and implemented for traditional big business by a technocracy that has failed to consider certain realities, the laws and regulations overlap, being too numerous and difficult to interpret, and too complex for the owner/manager of the small and medium-sized business (SMB) who is often the only management the company has. What is more, these laws and regulations, because they fail to take into account the endless effervescence of economic and social relations, are in many cases too rigid. The result, for instance, is that small and medium-sized business (SMB) is subject to fiscal and para-fiscal burdens that are likely to jeopardize its survival and that the emergence of new small and medium-sized businesses (SMB) is therefore compromised. However, small and medium-sized businesses (SMB), because of their simple, flexible structures, their ability to adapt to change in a continually shifting economic context, and their enormous capacity for job creation, play a dominant role in the economy and should therefore not be overlooked by the lawmakers.

The fiscal and para-fiscal burdens resulting from regulations are of three types: 1) the direct costs incurred by all businesses, but which are difficult for SMB to bear, being forced to devote proportionally larger resources to comply with tax laws; 2) the costs incurred by the State to promote regulations, enforce them and, if necessary, ensure a certain equitableness between the parties in the event of disputes caused by their enforcement; 3) the indirect costs or social costs, namely those borne by society when companies introduce production and marketing techniques, and standards of quality that take them further and further from cost minimization.

Of course, not all laws restrict small and medium-sized business (SMB) directly; some attempt to alleviate the risk involved in starting small and medium-sized businesses, to promote their growth, to stimulate and maintain innovation. The objective of this chapter is to take stock of the major federal and provincial laws that affect SMB, either directly or indirectly, and to describe them briefly.

For our purposes, given the very large number of provincial and federal laws, we have included only a few of the federal laws whose impact on SMB is evident, if only in the title. We have instead trained most of our efforts on provincial laws which we selected arbitrarily, according to whether their denomination connotes a certain relationship to economic activity, and therefore to small and medium-sized business. Our choice was guided by the following considerations: 1) laws that may have a direct impact on productivity and competiti- veness because of the heavier tax burden generated by the regulations or an indirect impact due to the paperwork; 2) laws that restrict access to the sector; 3) laws that have a favourable impact on business. This breakdown does not mean that a law will have but one consequence, nor that one consequence will exclude others. A law and the resulting regulations may have a number of simultaneous effects: direct, indirect or restrictive.

1.2 - Laws that have a direct effect on the corporate tax burden or indirect effects due to the paperwork involved in the regulations

1.2.1 - Provincial Laws

First and foremost are the federal Income Tax Act R.S. 1952, c. 148, and the Quebec Taxation Act I-3.

In Quebec, all corporations must file income tax returns with the Ministère du Revenu du Québec and Revenue Canada, whether they are taxable or not. The return, which includes all the requisite financial statements and slips must be filed within six months after the close of the financial year. Producing these statements is no easy task; preparing the required documents (slips and financial statements) and information demands a great deal of care and time because of their complexity and their sheer numbers.

The owner or partner in a company or firm belonging to the liberal professions is also required to produce a statement for both levels of government. Essentially, the income that he/she derives from the business is calculated after the appropriate financial statements have been prepared, the appropriate forms filled out, the approved funding accounted for, the stock and inventory levels evaluated, in accordance with generally accepted accounting principles. Revenue Canada in its T1 sur les revenus d'entreprises ou de profession libérale 1986, p. 1 states that provisions for calculating corporate income are highly technical and often complicated.

In Quebec in 1986, manufacturing firms whose income was eligible for the small business deduction (SBD) were taxed a minimum 10% federally and 3.22% provincially. The tax rate can rise to a maximum of 37.8%[1] federally if the income is derived from other sectors of activity, and to a maximum of 5.9% provincially. Manufacturing firms that sell finished products also pay federal sales tax. In addition, Quebec businesses are required to pay a provincial tax on capital of 0.45% or a minimum $100 ($50 for farm corporations). They are also subject to municipal and school taxes.

The entrepreneur in Quebec must also shoulder another social burden, namely the taxing of the payroll that finances the Fonds des services de santé, the Commission de la santé et de la sécurité du travail, the Régime des rentes du Québec, the Commission des normes du travail, and the Canada Unemployment Insurance Commission. All in all, in 1986, employers in Quebec contributed a total 10.5% of their company payrolls to these funds. However, since the payroll of small companies represents a higher percentage of their costs than it does for large companies, it is easy to see why small companies are more heavily burdened than the medium-sized and large companies.

---

[1] This percentage includes the 5% surtax effective between July 1, 1985 and December 31, 1986.

There are three major laws governing the manner in which payrolls are taxed provincially and one law, federally. We will examine them one at a time.

An Act respecting labour standards: N-1.1 – According to this law, employers must pay the Commission des normes du travail a sum not exceeding 1% (presently 0.125%) of the total salaries they pay their personnel and of the sums they are supposed to pay by virtue of Section 1015.2 of the Taxation Act. In 1986, the maximum annual salary that could be assessed by virtue of this law was $34,500. The Commission, in accordance with the discretionary powers conferred on it by the law, may make it compulsory for any employer or category of employers that it shall designate, to have an accounting system or keep a record of the full name and address of each employee, the employee's position, daily starting time, stopping time, including all breaks, type of work, the salary paid, as well as any other information deemed useful to the enforcement of this law or regulation.

The employers are required to pay annual holidays and statutory holidays, coffee breaks, one, two or three weeks of vacation at 4% or 6% of the employee's gross annual salary, as applicable. They must also give the employee advance notice of his dismissal, ranging from one to eight weeks according to the employee's seniority. If the employer makes it mandatory to wear a uniform, it must pay for the purchase and maintenance of this uniform for minimum-wage employees. What is more, the Commission may pass regulations to determine the labour standards governing, among other things, the right to maternity leave and, if applicable, the compensation attendant on this leave, the modes of application, length and distribution of this leave and, generally, the rights and benefits granted a pregnant employee while she is at work or supposed to be. It goes without saying that this imposes a certain number of administrative formalities on the company.

An Act respecting the Régie de l'assurance-maladie du Québec: R-5 – This law establishes the functions of the Régie, its method of financing and its role in the financing of Quebec's health care needs. In accordance with Section 34 of this law, the employer must pay the Ministre du Revenu a contribution not exceeding 3% of each employee's salary. In 1986, the contribution was 2.0% of the payroll, the maximum annual contributory earnings being $34,500. For a small company, such specific contributions drawn on the payroll certainly represent a fairly substantial burden especially if the company is in its early years, which are crucial to its survival.

An Act respecting the Régie des rentes du Québec: R-9 – This law obliges the employer to collect the employee's contribution at source, to add an equal portion to it and forward everything on the prescribed date to the appropriate ministry. The employer contribution in 1986 stood at 1.80% of the payroll and the maximum gross annual contributory earnings was $25,800, with the first $2,500 being exempt from the contribution to the plan. The law empowers an organization called the Régie des rentes du Québec to carry out or commission research or studies, to investigate any matter within its jurisdiction and to make recommendations to the Ministre de la Main-d'oeuvre et de la Sécurité du revenu.

The task of collecting and forwarding the contributions each month is of course a burden on the small company, mainly in terms of extra administrative tasks.

Employment and Immigration Reorganization Act: C-54 (76-77) – This federal law establishes the Employment and Immigration Department, and the Commission and federal Advisory Council of the same name, and amends the 1971 Unemployment Insurance Act, especially Sub-Section 52 (1) which forces the employer to pay the refund amount owing by the claimant directly to the Receiver General as required by virtue of Section 51 of the Unemployment Insurance Act. In 1986, the employer had to pay the Receiver General a contribution equivalent to 3.29% of his company payroll and the maximum gross annual insurable earnings was $25,740.

Among the other laws that we examined and which may be included in this category are:

The Charter of the French Language: C-11 – This provincial act makes the French language the official language of Quebec, especially at work. According to Section 41, the employer must write all job and promotion offers, collective agreements and their schedules, job application forms, order forms, invoices, receipts, discharges, public signs, commercial advertising and firm names, etc. in French. Furthermore, any business employing no more than four people, including the employer, may post signs in both French and another language, provided that French is as prominent as the other language. Any company with fifty employees or more must have a francization certificate from the Office de la langue française.

Companies Information Act: R-22 – This Quebec law requires that all companies doing business in Quebec present the Inspector General with a detailed report containing information relevant to their identity and financial position. In addition to this annual report and the related charges, Section 5 of the law stipulates that the Inspector General may at any time demand that the company submit a report on any matter relevant to its business within a specified time. Failing this, each of the company's directors will be liable to a $25 fine for each day of delay, plus the initial charges; other applicable penalties include prison sentences of up to 3 months.

An Act respecting commercial establishments' business hours: H-2 – The objective of this law is to regulate the business hours, the opening and closing times, as well as the admission of customers to commercial establishments.

Meals and Hotels Tax Act: T-3 – This law makes any establishment that sells meals and beverages for consumption on the premises its agent for collecting the tax and remitting it on a monthly basis to the Ministre du Revenu. This task represents an additional burden on the small retail business, even though Section 3, Sub-Section 2 provides that the Ministre du Revenu may exempt the establishment in accordance with Government regulations, which rarely happens.

National Holiday Act: F-1.1 – This law makes June 24th an official and compulsory statutory holiday. It concerns all employers, barring a few exceptions. The employer is required to pay or grant another day off to employees who are forced to work because of the nature of their job. The law provides for a penalty for all infractions.

An Act respecting beer and soft drink distributors' permits: P-9.2 – The retail sale and delivery of beer and soft drinks in non-returnable containers may be carried out by permitholders only. However, carriers acting on behalf of permitholders are not required to have their own permit. Penalties are provided for any infractions to this law. The cost of the permits must be subtracted from the retailer's profit because, prices in this sector being fixed and competition very sharp, not even a part of the cost of the permits can be passed on to the consumer through higher prices.

Mining Duties Act: D-15 – This law restricts the profit of a mine operator to a rate of 18% for each annual financial year. The tax rate remains fixed, regardless of the profit level. This duty is applicable to mine operators over and above the income tax owed to the governments of Canada and Quebec.

Companies Act: C-38 – This law covers all aspects of the legal life of companies, whether small, medium or large. It specifies the rules for registration, merger, amendment of articles, changes of company name and dissolution. The law also contains instructions for bookkeeping, minutes of meetings, and audit and inspection procedures by appropriate authorities.

Companies and Partnerships Declaration Act: D-1 – With this law, the Government is ensuring that companies and corporations register their corporate name, the location of their headquarters, and the name of their principal directors with a protonotary.

Workmen's Compensation Act: A-3 – The objective of this law is to ensure that individuals who are victims of work accidents receive benefits that cover part of the earnings lost as a result of absences from work or disability caused by this accident. The law applies to all employers. Evidently, the assessment rate payable by the employers will vary according to the industry, the nature of the work and the risks involved.

The restrictions imposed by this law may have an impact on production costs (contributions) and administrative costs (forms, reports, follow-up, inspections, etc). The law also forces companies, under penalty of fines and rate increases, to reduce the number of accidents and the length of the absence from work, to improve their production processes, and comply with a series of prevention standards as stipulated in the Act respecting the Commission de la Santé et de Sécurité au Travail (CSST) and the Act respecting industrial accidents and occupational diseases.

An Act respecting industrial accidents and occupational diseases: A-3.001 – The aim of this law, which is connected to the preceding one, is to repair occupational injuries and their consequences for the victims. It provides for all the processing, compensation, assessment, payment and settlement mechanisms related to occupational injuries.

The contributions payable by employers are not based on the size of the company or its potential for correcting dangerous situations. In this sense, the small business is subject to relatively higher costs than large companies and is therefore often at a disadvantage.

An Act respecting occupational health and safety: S-2.1 – The objective of this law is to eliminate dangers to the health, safety and physical integrity of workers, at the source. It establishes the mechanisms for the participation of workers and their associations, and of employers and their associations, in the achievement of this objective.

This is the third in a group of laws concerned with occupational health and safety. It protects the employees by granting them the right of refusal, a preventive right, the right of withdrawal for pregnant women, the right to protective equipment, etc. The employer is required to provide safety equipment, protectors, prevention programs, accident reports, etc. at his own expense. The employer must furthermore comply with the requirements established by safety standards, and be available for inspections by representatives of the CSST, under penalty of severe fines. The company, whatever its size, must comply with the law: pay the contributions, submit reports, undergo inspections, etc.

Labour Code: C-27 – This code governs the mechanisms of union accreditation, arbitration of grievances and labour relations, including rules regarding strikes and lockouts, the right of appeal on labour issues, etc. It is part of the general philosophy of protecting the rights of individuals and is one of the most important and most widely applied laws in the field of labour. It applies to all employers. Broadly speaking, the Code obliges the employer to respect the rights of workers and of workers' associations, under penalty of fines.

Consumer Protection Act: P-40.1 – This law aims to ensure protection of the consumer against abuse and errors of all types by merchants. It applies to all contracts for goods and services concluded between a consumer and a merchant. It especially concerns small and medium-sized commercial firms and service companies, namely over 25% of the companies surveyed by the ministère de l'Industrie et du Commerce (MIC). When a consumer complaint is filed, the law provides for legal procedures to force the company in question to refund, compensate or exchange the goods or services that are deemed non-compliant under the law.

1.2.2 - Federal Laws

Weights and Measures Act: C-36 (70-71-72) – This federal law stipulates the units of measure to be used in Canada and forces companies to record specific information (weight, volume, etc.) on the merchandise they sell. The precise marking technique is governed by regulations. Inspections of instruments of weight and measure may be subject to costs which are payable by the operator. The law does not specify the amount of these costs. This law may represent a limitation for some companies, depending on the way in which it is applied, as well as on the severity and complexity of the resulting regulations.

Fair Wages and Hours of Labour Act: L-3 (70) – This federal law establishes standards for wages and hours of labour on public works and contracts (construction, restoration, repair or demolition of a structure) concluded with the Government of Canada. It gives the Government the power to ensure that established standards are respected by demanding that appropriate books and records be kept and by reserving the right to demand detailed proof.

Consumer Packaging and Labelling Act: C-41N – This law obviously aims to protect the consumer, but its application implies additional costs for producers who must comply with very strict standards. Also, in accordance with the regulations arising from this law, the company is subject to inspections of its facilities at any time, which can lead to further costs.

Canada Labour Code: L-1 – This legislation specifies the labour and safety standards for the employees of certain companies, notably financial institutions, maritime, air and rail transportation companies, broadcasting stations, and all companies that are not subject to the exclusive legislative power of the provinces. Specifically, this law prohibits discrimination in all its forms, establishes wage parity between men and women, minimum standards for remuneration, vacations and statutory holidays. The regulations resulting from this law may range from the keeping of appropriate records to the obligation to inform employees about working conditions and working hours.

Excise Act: E-12 and Excise Tax Act: E-13 – These laws determine which industries are subject to excise and make it compulsory for these industries to obtain a license, submit detailed reports, undergo inspections and keep records in accordance with the formula and manner prescribed by the regulations for fixing the excise tax amount.

These laws are restrictive for all companies operating in Canada, except for a few small manufacturers, designated by regulation, which are not required to obtain a license.

Customs Tariff Act: C-41 – This law gives the Governor-in-Council the power to set customs tariffs, modify such tariffs, and decide on the advisability of decreeing necessary surtaxes, etc.

This law affects all businesses, especially small and medium-sized businesses that depend on imports for their raw materials. Companies, both small and large, constantly run the risk of their imports being taxed as a result of regulations, and of their production costs therefore increasing.

1.3 - Laws that Restrict Access to a Sector

In this second group, we discuss laws that restrict access to an economic sector, by imposing standards on the industries in this sector, by demanding licenses or permits of those entering the sector, at a cost determined by regulation, by limiting the number of firms that can operate in the sector or by controlling production with quotas and price ranges, or by any other provision that directs sector industries towards objectives that are defined and set by government. Among these laws are:

1.3.1 - Provincial Laws

Environment Quality Act: Q-2 – According to this law, the person responsible for an industrial activity whose facilities are likely to release contaminants into the environment or provoke a change in its quality must obtain a certificate of authorization from the Deputy Minister. To obtain this authorization, the application must be accompanied by detailed studies describing the activity in question along with an evaluation of the volume of the contaminants deposited, released or emitted in or into the environment as a result of this activity. Furthermore, the Deputy Minister may demand any additional information, research or study that he deems necessary to assess the full impact of this activity on the environment and, therefore, its acceptability. He may also demand the use or installation of equipment and force the individual responsible for the source of contamination to submit data collected in accordance with any methods that he may determine.

Infractions to this law are punishable by severe fines ranging from $100 to $30,000 for a corporation.

An Act respecting labour relations in the construction industry: R-20 – This law created the Office de la construction du Québec, which organization is assigned to regulate the placement of construction workers. Working conditions are defined by decree however. The employer is required to join the Association des entrepreneurs en construction and to pay dues and submit a monthly report to the Office. It may only hire workers that have a card issued by the OCQ. It must also deduct union dues from its employees' wages and forward them to the OCQ each month.

This law may therefore restrict access to this sector for newcomers.

An Act respecting building contractors' vocational qualifications: Q-1 – This law establishes standards for both actual and potential building contractors. It authorizes the Régie des entreprises de construction to determine their expertise and their solvency while setting the amount of the required deposit as well as the cost of an operating license.

The law therefore regulates access to this sector by invoking either expertise or solvency. Furthermore, it also gives Régie investigators the right to decide whether investigation of such and such a builder is warranted and to determine the investigation costs, which are paid by the contractor being investigated.

Retail Sales Tax Act: I-1 – This law regulates the taxation and collection of provincial sales tax on moveable goods, insurance and other items. It adds to the administrative paperwork imposed on businesses because of the procedure for registering and obtaining permits, sending monthly reports even if no sales have been made, and the obligation to report all sales, whether taxable or not, as well as the 200 exceptions and exemptions that must be taken into account.

Dairy Products and Dairy Product Substitutes Act: P-30 – This law created the Régie des marchés agricoles du Québec which regulates the dairy products and dairy product substitutes market by setting standards for production, transportation and pricing of the products it governs. Production and transportation activities require a permit issued by the Régie.

As a result of the guaranteed price policy, this market is relatively inaccessible to newcomers because production levels have to be closely monitored.

Butter and Cheese Societies Act: S-29 – This law defines the conditions according to which a corporation may be formed to make butter or cheese or both, as applicable. It also specifies the duties and privileges of the corporation.

Once formed, the corporation is required to keep an up-to-date record of stock transactions and a share register, and to prepare an annual report each December, including the annual operating statement, which is sent to the ministère de l'Agriculture, des Pêcheries et de l'Alimentation.

An Act respecting commercial fisheries and aquaculture: P-9.01 – This is a highly regulated field and is accessible only by concession and in accordance with the regulations of the ministère de l'Agriculture, des Pêcheries et de l'Alimentation. Concessions are generally granted for one year and the concessionaire is furthermore subject to all constraints, restrictions and prohibitions that the Government may deem necessary to establish by regulation (Section 8).

The Agricultural Products, Marine Products and Food Act: P-29 – As above, this too is a highly regulated sector. Aside from the products' selling prices, the regulations are mainly aimed at production, distribution, the issuance of permits and the level of competence.

An Act respecting the Régie de l'électricité et du gaz: R-6 – This too is a highly regulated sector in terms of production, distribution, prices, production costs, as well as the profits that an entrepreneur may make.

An Act respecting detective or security agencies: A-8 – This law establishes the mechanisms for issuing permits to detective or security agencies, as well as for their operation and their responsibilities vis-à-vis the public.

Section 11 of the law gives the Government the right to issue directives to control or even reduce access to this sector whenever it deems appropriate.

An Act respecting the marketing of marine products: C-32.1 – The objective of this law is to promote the pooling of marine product processing and marketing operations in order to promote sales, guarantee quality and ensure a constant supply on the market. The law also aims to ensure market stability.

However, in accordance with this law, interested parties must draft a nine-point marketing agreement, the sixth point of which is relatively restrictive. Indeed, according to this sixth point, companies must prepare forecasts for supply and demand, and describe specific market situations that are not always easy to discern. What is more, the Marketing Board may "amend or replace" the operating regulations that are in effect. Similarly, with respect to applying and enforcing the law, the Board has very broad discretionary powers aimed at "maintaining a balance between the quantity of marketed marine products designated in a marketing agreement, the available supply of marine products, and the needs of the market." Nevertheless, the law does not specify how the Board is to go about maintaining this "balance" so as to avoid unduly jeopardizing the interests of the parties concerned and of the consumers.

Hotels Act: H-3 – This law regulates the issuing of operating permits, categories and names of hotels. It particularly aims to protect the traveller by ensuring that permitholders have the appropriate expertise in hotel management and are morally reliable individuals. The restrictions stipulated in the law do not represent a major barrier to small businesses interested in the field.

Travel Agents Act: A-10 – This law governs the activities of the travel agent, especially in the area of travel reservations and organization. The employer is required to have a permit and must meet certain conditions, such as the keeping of records and the payment of deposits into a trust account. The Government reserves the right to pass regulations to establish categories of travel agent, to determine methods of delivery, renewal, and transfer of permits, etc. The law is enforced by the Office de la protection du consommateur.

An Act respecting land use planning and development: A-19.1 – This law establishes the basis for regulating land zoning in Quebec. The provisions of the law may heavily restrict the number of locations available to a company or, if the company is already established in an area, impose certain obligations on it with regard to the municipality such as connection with a water distribution system and execution of embankment work.

Real Estate Brokerage Act: C-73 – This law limits access to the real estate market to real estate brokers, and to building agents who have permits and who can post a bond guaranteeing their responsibility. The market is also open to builders who are duly registered and who meet the conditions stipulated by law. All members of the real estate brokerage market are required to record transactions in an appropriate register. This sector is relatively unsuited to the expansion of small business because of the regulations and because it is difficult to introduce new technology that could make these enterprises more dynamic.

Timber-Driving Companies Act: C-42 – This law defines the procedure for forming a timber-driving company. Application of this law involves an enormous amount of paperwork. In fact, according to Section 8, a very elaborate report must be sent to the ministère de l'Énergie et des Ressources and to the Municipal Council before the projected work may begin. The company must then wait at least 30 days for the approval of the minister. The company's internal bylaws are also governed by the law, which stipulates that they must be published for three consecutive weeks in the newspaper nearest to the place where the directors ordinarily meet to manage and resolve the company's affairs. A detailed annual report must be submitted to the ministère de l'Énergie et des Ressources and regular accounts must be kept up to date at all times and be available for inspection and examination not only by shareholders, but also by representatives of the ministry. The law determines the company's rate of profit, which may never exceed 10% of the operating capital. It also determines the royalties applicable to the various types of wood.

Trust Companies Act: C-41 – This law prescribes the means of forming a trust company. Access to this sector is not easy as "it must be established to the satisfaction of the Government that it is expedient, as being for the convenience of the public, that there should be a trust company or an additional trust company in the place where the proposed company will have its head office."

Eligible companies must undergo periodic inspection by the Inspector General and file a detailed annual report of their operations, along with payment of the fees involved in the application of the law, which are determined annually by the Government.

Gas, Water and Electricity Companies Act: C-44 – This law outlines the procedure for forming a company in the gas, water and electricity sector. The law also specifies the internal operating conditions for the company once it is formed, and defines its duties vis-à-vis the public as well as its rights as a public utility.

Public Health Protection Act: P-35 – The health sector is highly regulated in Quebec. The law provides for the procedures for delivering permits for ambulances, as well as standards for undertakers. There is nothing in the law to prevent dynamic small and medium-sized businesses (SMB) from accessing the sector.

An Act respecting collective agreement decrees: D-2 – The purpose of this law is to make obligatory, modify, extend or repeal agreements relative to a trade, industry, commerce or profession. It is binding on all workers and employers in Quebec or in a particular region of Quebec. In its current form, the law governs the procedure for establishing working conditions in sectors where a large number of collective agreements and employer agreements have been concluded. For instance, it authorizes the establishment of decrees for the construction, taxi, and barber and hairdresser sectors and a few others. These decrees aim mainly to create a balance in the supply and demand among workers, employers and consumers.

The law may occasionally represent a barrier to the sectors it governs, but it cuts down on the paperwork and the burden of decentralized collective bargaining, and reduces the length and frequency of strikes.

Health Insurance Act: A-29 – This law covers the procedures and rules relevant to the territorial distribution of health professionals, their remuneration, their working conditions, the services they render and the agreements that are concluded with health professionals. It also covers options respecting the withdrawal of health professionals and Régie de l'Assurance-Maladie du Québec (RAMQ) administration of fee payments to professionals.

1.3.2 - Federal Laws

There is just one we would like to mention here: the Act respecting the export and import of strategic and other goods or the Export and Import Permits Act:

E-17 (70) – This federal law gives the Government the power to establish lists of controlled import and export goods, and of the countries that are subject to this control. It also gives the minister in charge of enforcing this law the right to issue licenses and certificates for the import and export of these goods.

The main impact of this law for small businesses pertains mainly to all the paperwork required when they solicit information about the necessary commitments and the procedure for applying for licenses and certificates.

1.4 - Laws Favourable to Small and Medium-Sized Business (SMB)

This third group of laws consists of those that favour the development of new businesses or the survival of existing ones. These laws offer positive changes to the environment in which small and medium-sized businesses (SMB) evolve, either by granting them subsidies directly, by lightening the tax burden with tax credits, by introducing purchasing policies to encourage small manufacturing firms and, finally, by offering technical assistance to companies that would like to improve their productivity with new technology, etc. The reason why the public authorities have adopted such attitudes vis-à-vis SMB is that the latter create a vast number of jobs and contribute enormously to regional expansion. In fact, in 1984 for instance, small and medium-sized businesses were responsible for 41.5% of all jobs created in the private sector in Quebec[2].

1.4.1 - Provincial Laws

An Act respecting the Centre de recherche industrielle du Québec: C-8 – This law creates the Centre de recherche industrielle du Québec whose mission is to carry out research in the applied sciences, develop products, processes, industrial and scientific equipment, and obtain and disseminate information and data of a technological or industrial nature.

Small businesses can benefit enormously from the Centre's information services, the latter being considered the research laboratory for companies that cannot afford their own. In fact, because the Centre occasionally renders services to small businesses free of charge, it plays a very useful role as the latter cannot always afford the occasionally very high cost of gathering information.

An Act respecting the Société de développement industriel du Québec: S-11.01 – The Société de développement industriel du Québec, whose creation and operation are authorized by this law, focuses its efforts on specific categories of small and medium-sized business that are equipped with modern technology, are oriented towards the export of goods and services made in Quebec, and are engaged in research and innovation.

---

[2] Ibid, p. 5, note 1.

Industrial Development Assistance Act: A-13 – This law authorizes the government to grant financial assistance to manufacturing firms that:

a) use modern technology to manufacture a product of innovative design, or a product that is not yet made in Quebec or whose production in Quebec is insufficiently competitive for the domestic or international market;

b) are consolidating their means of production or pooling all or part of their operations to make themselves more competitive or increase their share of the market;

c) while viable, are otherwise unable to obtain financial assistance at reasonable rates and conditions and thus contribute more effectively to the economic expansion of Quebec or one of its regions;

d) concentrate on exporting goods manufactured in Quebec.

The assistance, which may take the form of a secured loan (mortgage, security, collateral) or guaranteed full or partial repayment including interest, is granted for the purchase, construction, improvement or enlargement of factories or facilities, the purchase of land required for the operation of businesses, the purchase of machines, tools and equipment destined for the operation of factories or facilities, the acquisition of patents or their operation, the improvement or consolidation of the company's financial structure and the purchase of shares in manufacturing or commercial firms.

The law offers substantial advantages for manufacturing firms seeking financial aid at affordable costs. The law also promotes the emergence of small non-traditional businesses.

An Act respecting the Société québécoise d'initiatives agro-alimentaires: S-21 – The law has two objectives. On the one hand, this corporation promotes the establishment, modernization, expansion, development, consolidation or association of industries in the food sector; on the other hand, it is ready to participate or intervene in the production, processing, packaging and marketing of any product connected with the agricultural, food or fisheries sector. The Société québécoise d'initiatives agro-alimentaires is a significant asset for small and medium-sized businesses in this sector that are having problems in one or more of the areas enumerated above, especially the packaging and marketing of their products, two stages which more often than not are a severe test of their effectiveness.

An Act to promote special credit to agricultural producers during critical periods: C-79 – This is a benevolent and reassuring law for small businesses which may, during "critical periods", obtain loans with favourable repayment conditions.

Maritime Fisheries Credit Act: C-76 – This law is dedicated to helping small entrepreneurs. It authorizes the ministre des Finances to guarantee and reimburse advances or loans, if necessary, to a maximum of $500,000.

An Act to promote credit to farm producers: C-77 – This law is particularly favourable to small and medium-sized businesses (SMB) already established and engaged in farm production. In fact, the latter are eligible for loans and repayment conditions that are highly advantageous.

Farm Credit Act: C-75 – This law is especially helpful to young farmers and small agricultural businesses, as it grants loans for farm improvements or enlargements.

An Act to promote long-term farm credit by private institutions: C-75.1 – This law is similar to the previous Act C-75, except that the loan may be obtained from a private institution and still be guaranteed by the Government.

Forestry Credit Act: C-78 and an Act to promote forest credit by private institutions: C-78.1 – These two laws are highly advantageous to small and medium-sized businesses (SMB) with the expertise to carry out forestry operations or development. In fact, they empower the Office du crédit agricole to grant or guarantee loans at favourable conditions to improve the management, operation or productivity of businesses in this field.

An Act respecting assistance for tourist development: A-13.1 – This law establishes that financial assistance may be granted any enterprise whose activities apply to one of the categories of tourist projects defined in the regulations. Assistance is granted for the purchase, construction, renovation, improvement, enlargement or development of immoveable property, as well as the machines or tools connected with a tourist project. It can also be used to acquire, operate or improve patents, concessions or franchises, or to consolidate the financial structure of a company.

The assistance may take the form of guaranteed repayment of all or part of a financial commitment, a loan, a subsidy or partial exemption from a loan repayment.

Without a doubt, the law favours SMB in the tourism sector. However, it implies the inconvenience of lengthy formalities for submitting applications and obtaining information and it is very demanding with respect to documents and other items that must be submitted.

Employment Bureaus Act: B-10 – Via this law, the Government can establish and maintain employee placement offices in the cities and towns. Registration is free of charge for both employees and employers.

Employers may operate their own placement offices on condition that they obtain a permit from the appropriate Minister and that they do not demand a fee from job seekers. The law is an advantage for fledgling businesses that would otherwise incur charges for the recruitment of their personnel.

An Act respecting the Agence québécoise de valorisation industrielle de la recherche: A-7.1 – This law establishes the Agence québécoise de valorisation industrielle de la recherche, whose mission is to promote technological innovation and to contribute to disseminating the results of research into industrial or commercial applications likely to have an economic impact on Quebec.

Innovative SMB may benefit extensively from the results or processes developed by the agency.

An Act to promote the establishment of young farmers: E-12.1 – The objective of this law is to encourage young farmers operating alone or organized as a corporation, company or other group to establish themselves in the agricultural sector, by granting them subsidies or low-interest loans.

Stock-Breeding Syndicates Act: S-39 – This law encourages the establishment of stock-breeding syndicates. Small and medium-sized businesses can easily form syndicates of this type, for the procedure is simple and regulations are kept to a minimum.

Horticultural Societies Act: S-27 – This law describes the procedure for establishing a horticultural, apple or fruit growers society. The process is simple and is easily accessible to small businesses.

An Act respecting manpower vocational training and qualification: F-5 - This law authorizes the Government to create commissions for training or retraining manpower, according to need. They can certainly be of help to small businesses as an effortless means of meeting their skilled labour requirements.

An Act to promote industrial development by means of fiscal advantages: D-9 – The objective of this law is to grant tax deductions on investments that promote the development of manufacturing and processing firms in Quebec. It specifies the investments that are eligible for the industrial development deduction. The types of businesses, amounts and geographical zones are also stipulated in the law. The minimum investment amount is $150,000.

In spite of the very obvious advantages that this law affords business, its understanding and interpretation require a fairly sophisticated knowledge of tax mechanisms, as well as advance planning of the possible deductions. The benefits conferred by the law are therefore accessible to small businesses inasmuch as the latter are well informed and specific about their investment objectives.

An Act respecting Quebec business investment companies: S-29.1 – This law aims to provide SMB with legal, financial and fiscal opportunities to pool their investments in the industrial expansion of Quebec. It stipulates the registration procedures, the eligible investments and regulations that may be decreed by the Government. Quebec business investment companies are controlled and approved by the Société de développement industriel du Québec and are specifically designed for companies with fewer than 25 million dollars in assets or a net shareholder's equity of no more than 10 million dollars. A Quebec business investment company must amass a minimum of $100,000 in capital stock in order to be recognized as such. As it stands, the law is highly favourable to SMB and requires relatively few administrative documents; neither does it include a provision restricting market operations.

An Act respecting fiscal incentives to industrial development: S-34 – This law aims to establish an industrial recovery fund to enable corporations to plan for expansion while promoting reinvestment of their profits and facilitating the financing of activities likely to improve their economic and financial performance.

Eligible companies with fewer than 200 employees and assets in excess of $7,500,000 may deposit to the fund, to their own benefit, up to 50% of the tax owing in any given year. According to Section 13 of the law, the amounts paid into the recovery fund must be withdrawn within five years and used by the company for manufacturing or processing purposes.

An Act respecting farm-loan insurance and forestry-loan insurance: A-29.1 – This law ensures that lenders are reimbursed for losses of capital and interest resulting from a bad farm loan or forestry loan, as well as for the eligible expenses incurred by the lender while protecting its security or while claiming or collecting the sums owing or that have fallen due from the defaulting debtor. It defines the loan insurance clauses and is mainly directed at financial institutions. An initial sum of 10 million dollars was allocated to the fund in 1978. The law promotes the development of small and medium-sized businesses (SMB) in the farm and forestry sectors by making it easier to obtain loans that involve some degree of risk.

1.4.2 - Federal Laws

Employment Support Act: C-56 (1970-71-72) – Its objective is to support employment in Canada by alleviating the disastrous consequences that would arise for Canadian industry from the application of foreign surtaxes and other similar measures. The law grants employment subsidies for manufacturing firms that can demonstrate that they will probably or certainly suffer a drop in their labour requirements for a given period as a result of measures taken by other countries regarding Canadian imports. Small export companies will benefit from this law, especially during periods when the countries with which Canada trades display protectionist tendencies.

Regional Development Incentives Act: R-3 (70) – The objective of this law is to promote productive employment in areas of Canada where measures are required to promote economic expansion and social renewal. Small businesses already established in these designated regions or planning to settle there may benefit from this law, even though it contains a few slight restrictions, such as the obligation for the companies to participate and cooperate occasionally in manpower, placement and retraining programs.

Small Business Loans Act: S-10 (70) – This law is primarily aimed at small businesses. It offers the banks government guarantees on certain types of loans to small business. To be eligible, the small and medium-sized businesses (SMB) must meet certain conditions as stipulated in the regulations of this law.

Industrial and Regional Development Act: C-160 (1980-81-81-83) – This law provides for financial assistance for the industrial development of all areas of Canada. It empowers the Minister to authorize subsidies, loans or guarantees for commercial businesses located in regions classified for industrial and regional expansion by the appropriate minister. The full impact of this law on existing small and medium-sized businesses and on the creation of new businesses can only be assessed in light of an analysis of the conditions imposed by the programs introduced by virtue of this law.

Export Development Act E-18 (70,81-82-83) – This law aims to facilitate and increase export trade by means of insurance, guarantees, loans and other financial measures. Working via the Export Development Corporation, the law insures the goods or the payments resulting from the export of goods, provides the necessary guarantees for export operations or, in some cases, lends money to exporters. This is a highly valuable service for businesses planning to export.

Export Credits Insurance Act: C-105 (1952) – This law authorizes the government to guarantee the financial commitments that foreign organizations have made to Canadian companies, or to make loans to these organizations for the purpose of making purchases in Canada. Like the previous law (E-18), this law may be of enormous help to small export companies.

1.5 - Conclusion

The implementation of laws that regulate economic activity finds both support and opposition in the field of economic theory. Those in favour see it as a means of correcting the shortcomings of the market aspects mentioned in the introduction to this chapter. Those opposed consider the laws and the resulting regulations to be merely a subtle way of reducing imports in order to protect certain industries. As Roderick MacDonald points out, the drafting of regulations is, for some, a firmly entrenched process involving powerful interests that seek undue advantages without the public's knowledge[3].

Without engaging in a debate which, in any case, lacks enough empirical data to either dismiss or confirm the theory, we can nevertheless acknowledge that some laws have consolidated, protected and guaranteed social benefits that would otherwise have been difficult if not impossible to achieve. At the same time, while perusing the text of the laws in order to determine their impact on SMB, it came as a surprise to discover the large numbers of laws that have been passed that, in some cases, are redundant and add to the occasionally heavy burden on the small entrepreneur.

First of all, we must acknowledge that the vast majority of the laws are still derived from the ideas that made big business into the driving force in the economy. They are rigid and have enormously reduced the ability of small business to adapt to change. These laws were designed as though all companies are managed like large companies, with a highly qualified staff capable of understanding the wording of the most complex laws along with all the administrative documents generated by the regulations. These laws are abstract, as though written for legal experts.

Laws are necessary, but they should be kept to a minimum to avoid redundancy and an accumulation of regulations. A table of contents, an explanatory summary and detailed index would facilitate the task for the small entrepreneur who is not necessarily an expert in the field. It would be desirable, it should even be recommended that information on laws be written so that it is more available to the public and easier to grasp the details.

---

3. MacDONALD, Roderick A., "Understanding Regulation by Regulations" in Regulations, Crown Corporations and Administrative Tribunals, Yvan Bernier and Andrée Lajoie, research coordinators, Report, Royal Commission on the Economic Union and Development Prospects for Canada. Vol. 48, pp. 89-175, 1985.

Chapter 2

The Adaptability of Small and Medium-Sized Business (SMB) to Economic Cycles

2.1 - Definition and Dating of Economic Cycles

2.1.1 - Definition

Back in 1860, Clément Juglar observed the alternating phases of expansion and recession in Western economies, a complete cycle extending over 8 or 9 years. Later, Joseph Kitchin (1923) demonstrated the existence of shorter cycles, of an average duration of approximately 40 months and generally associated with stock market variations. A few years later, in 1928, Russian economist Nikolai D. Kondratieff revealed the existence of long phases of prosperity and stagnation – inherent in the capitalist system – that can last up to 50 or 55 years. Most economists, however, consider the existence of Kondratieff's cycles to be largely unverified. Criticisms are essentially of a statistical nature, given the length of the phenomenon. The study of these cycles has therefore been abandoned for the analysis of shorter cycles.

An economic or business cycle reflects fluctuations in economic activity. It is characterized by successive phases of expansion and recession that impact all sectors. While not periodic, it is a recurring phenomenon of varying scope that generally lasts from 1 to 12 years. The economic cycle is also specific to market economies.

In recent years, some authors have begun to refer to a new concept known as the "growth cycle", which likens a slowdown in the rate of growth to a recession. Thus, a growth rate that falls below the "potential" rate can be equated to a decline. Other than the fact that this definition represents a return to an older concept used in the 20's, it is very difficult to evaluate this "potential" growth rate.

Generally, and this is how we will interpret it in this study, a recession is defined as a period of at least two consecutive quarters or two out of three quarters during which economic activity suffers an absolute downswing, with a trough that is followed by a period of economic growth that will last at least three consecutive quarters.

2.1.2 - Dating Economic Cycles in Canada

The different phases of the economic cycle can be observed in the fluctuations in the Gross Domestic Product (GDP). Modifications to this aggregate, which is defined as the sum of the personal and public expenditures for goods and services, as well as investments and net exports, are a perfect reflection of the fluctuations in economic activity.

In Canada, the GDP only recently replaced the GNP (Gross National

Table 2.1

Actual Gross Domestic Product in Terms of Expenses,
at 1981 Prices
By Quarter, Deseasonalized
Canada, 1961 to 1986
In Millions of Dollars

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
1961	132 384	136 076	138 464	140 732
1962	144 732	144 892	147 100	149 732
1963	150 704	152 568	154 092	159 532
1964	162 548	163 216	165 676	166 576
1965	171 692	173 368	175 916	180 460
1966	184 592	187 100	187 624	189 736
1967	189 332	193 132	193 972	194 572
1968	196 556	201 568	205 088	209 076
1969	210 604	211 748	214 584	218 848
1970	-----> 218 504	-----> 217 400	221 176	220 912
1971	222 884	229 796	236 684	239 184
1972	238 420	244 928	245 864	252 552
1973	260 360	262 716	263 604	270 796
1974	273 488	275 072	276 736	278 728
1975	278 432	281 048	285 228	288 040
1976	294 624	301 344	303 416	303 168
1977	308 204	309 360	311 344	317 108
1978	320 172	324 836	327 040	330 956
1979	334 800	336 708	340 096	341 844
1980	342 776	-----> 342 264	-----> 340 716	347 780
1981	354 836	359 352	-----> 356 152	-----> 353 636
1982	-----> 348 748	-----> 344 424	-----> 342 492	-----> 340 664
1983	344 940	352 676	359 356	362 148
1984	365 820	373 376	376 948	381 704
1985	384 920	386 500	389 460	396 416
1986	398 948	401 800	402 584	402 792

Source: Statistics Canada, CANSIM (D20031).

Product) as a measure of economic activity. Its use has eliminated problems with unsatisfactory serial continuity; but unfortunately, it has also altered the dates of the periods of economic contraction. However, because of the better quality of information that goes into the composition of the real GDP, we will be using this new aggregate to date Canadian cycles.

If we refer to the above definition of an economic cycle,it would appear that there have been three periods of recession in Canada since 1961, namely the first two quarters of 1970, the second and third quarters of 1980 and, finally, from the third quarter of 1981 to the fourth quarter of 1982: six consecutive quarters that reported a downswing in the real GDP (see Table 2.1). Comparable data on Quebec's quarterly GDP in constant dollars is as yet unavailable, this information being currently under study.

2.1.3 - Causes of Recession

The factors that can potentially trigger a recession are many and varied. However, they can be divided into two categories: exogenous factors and endogenous factors.

Exogenous factors are natural (earthquakes, droughts, etc), political (the founding of OPEC, etc.) or again economic (recession affecting our trading partners, new monetary and fiscal policies adopted by governments, etc).

Endogenous factors are instead inherent in the functioning of market economies. Thus, every phase of the cycle implies its own stresses and imbalances that will of themselves bring the phase to an end and provoke a reversal in trends. Take for instance the investment cycle. In order to satisfy an increased demand for goods, entrepreneurs may decide to increase their production capacity. This growth in investment stimulates the economy. However, because the information is incomplete, the investment measures taken by the competition are almost unknown. There is therefore the risk of over-investment compared to the demand, and consequently of overproduction, which will lead to a drop in both profits and investments and to a resulting downswing in the economy. The same reasoning applies to production, the trigger again being the fluctuation in demand. The phenomenon accelerates and then corrects itself.

And what happens to employment during the various phases of the economic cycle? It is in fact a cycle indicator, but a delayed one. For instance, during a recovery period, companies will increase their working hours before they will hire new employees. In a crisis, the company will cut back on working hours before it begins to lay off employees. The length of the delayed reaction can run from nine months to a year. This is what different studies have shown. However, one might also wonder whether the phenomenon is the same regardless of the size of the business or its sector of activity. In fact, is the scope of phases of recession and expansion in employment comparable to that of economic activity in general? These are the questions that our next section will attempt to answer.

2.2 - Analysis of Employment During Periods of Recession and Growth

The data used in the following tables is drawn from the Statistics Canada publication entitled: "Employment Dynamics by Province, Industry Classification, Firm Size and Life Status". Such a longitudinal study of job creation can help define the dynamics of job creation, according to the size of the business, but also according to the components of net fluctuations in employment, which are:

- job creation as a result of a new company;
- the loss of jobs as a result of the closure of an existing company;
- the increased manpower requirements of an expanding company;
- a decrease in the manpower requirements of an existing company.

What is special about these statistics is that they focus on the individual behaviour of companies over a given period. Thus, we can track the job creation process from 1978 to 1985 through the small, medium and large sized companies so classified in 1978. The statistics are a good tool for observing the changes in these companies without the hindrance of annual reclassification. However, the publication also provides annual data for the analysis of job creation. Our main reservations regarding the use of these statistics are as follows:

- The companies studied are those that have at least one employee earning $500 or more a year.

- The number of companies and the classification by activity are not always very reliable, especially with respect to small business.

- The creation and disappearance of companies have been overestimated; this data should therefore not be used to estimate the probability of survival. However, this factor does not affect the estimated net variation in employment.

- The number of employees is calculated in person/years, by dividing the annual wages paid out by the average annual revenues as estimated and published by Statistics Canada in its monthly employment levels survey. This method may therefore have underestimated employment in small businesses, where the anual salary is generally lower than it is in large companies.

- The information has only existed since 1978. However, since this date, the economy of both Quebec and Canada has experienced major upheavals: a major crisis in 1982, followed to date by a period of sustained growth. We will therefore limit our analysis to a single cycle.

- The data is annual, which implies a comparison with the real GDP on the same basis. The analysis will be less sensitive, but given the length of the phases, the results will not be affected.

- The classification by number of employees used in this publication does not allow us to define small and medium-sized business (SMB) as companies with fewer than 200 employees. Statistical sources have imposed a definition of SMB as a company with fewer than 100 employees.

2.2.1 - General Situation

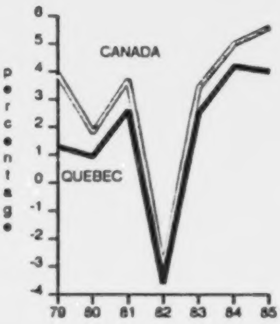
To obtain a GDP in constant dollars for Quebec, we used the GDP data in current dollars to which we applied the implicit price index used to calculate the actual Canadian GDP. As Graph 2.1 shows, between 1978 and 1985, the Quebec economy underwent a major crisis followed by a period of sustained growth.

Thus, in spite of the limited period examined, we have sufficient information to analyze the respective behaviour of both small and medium-sized businesses and large businesses in the area of employment during two major phases of an economic cycle.

Generally speaking, as Graph 2.2 and Table 2.2 show, small and medium-sized businesses (SMB) have kept perfect time with the economic situation and adapt immediately to fluctuations in economic activity. They suffer less than big business does in a recession, if you compare the respective drops in the employment rates in 1981-1982 (-5.3% and -7.3%), as well as the length of this decline in manpower (1 year and 2 years). Recovery, in terms of jobs, has therefore been delayed by an average of one year for big business. When job creation resumed in 1984, the rate was below that of SMB (7.3% and 8.8%) and plummeted again in 1985 to 0.6%, while SMB continued to grow at a constant pace (7.9%).

Graph 2.1

Growth Rate of the Actual GDP
Quebec and Canada
1978-1985



Sources: Statistics Canada, cat. no 13-001, Bureau de la statistique du Québec, Comptes économiques du Québec; compiled by the Direction des études sectorielles, DGRP, MIC.

Table 2.2
Employment* and Employment Fluctuations
Small and Medium-Sized Business and Big Business
Quebec, 1978 to 1985

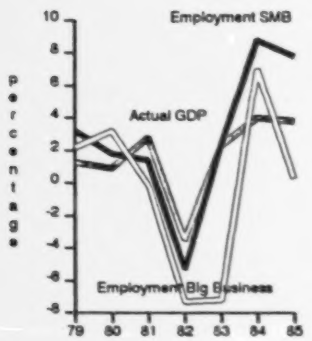
Years	Total Employment		Net Fluctuations in Number of Jobs		Fluctuations in Percentage		Fluctuations in the GDP
	In thousands		In thousands		%		%
	SMB	BB	SMB	BB	SMB	BB	
1978	778,8	1 366,7	—	—	—	—	—
1979	805,0	1 398,5	26,2	31,8	3,4	2,3	1,3
1980	819,5	1 445,0	14,5	46,5	1,8	3,3	0,9
1981	830,7	1 444,6	11,2	-0,4	1,4	-0,0	2,8
1982	786,4	1 338,5	-44,3	-106,1	-5,3	-7,3	-3,6
1983	806,9	1 242,7	20,5	-95,8	2,6	-7,2	2,6
1984	877,9	1 333,8	71,0	91,1	8,8	7,3	4,2
1985 (1)	947,1	1 341,9	69,2	8,1	7,9	0,6	4,0

* All sectors except Public Service.

1. The jobs presented are those reported in 1985 by companies classified according to size in 1984.

Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Graph 2.2
Growth Rate of the Actual GDP and of Employment for all Sectors Except Public Service
Quebec
1979-1985



Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987; compiled by the Direction des études sectorielles, DGRP, MIC.

In terms of the number of jobs, the performance of SMB is, here again, clearly superior to that of big business. Thus, during the recession, small and medium-sized business lost approximately 44,000 jobs. In 1984, however, total manpower requirements of SMB had regained and even surpassed 1981 levels. Big business, on the other hand, performed very poorly over this period, losing over 200,000 jobs between 1981 and 1983 and, in spite of very heavy job creation in 1984, it has been unable to regain the employment levels of 1981.

Speaking very theoretically, it might be tempting to extrapolate the performance of SMB and to hypothesize a comparable growth rate for both small and medium-sized business and big business. For instance, during expansion, namely between 1983 and 1985, small and medium-sized businesses created 160,700 jobs, a 19.3% increase in employment over 1981. If big business, all things being equal, had increased its employment levels proportionately, there would have been 280,000 more jobs available to Quebecers.

If we compare the respective performance of companies classified according to size, we observe that small businesses (under 20 employees) have shown the most vitality. As Table 2.3 reveals, small business has demonstrated a much stronger resistance in crisis periods (11,500 jobs lost in 1982, barely 2.6% of the 1981 employment level) and a great deal of vitality during expansion (102,600 new jobs between 1983 and 1985). Small business is therefore responsible for only 7.6% of the jobs lost due to the recession, but it provided 62.8% of the new jobs, which is excellent performance. At the other end of the scale, very large companies (500 employees or more) reported the worst performance in terms of both the disappearance and the creation of jobs, with a total 76,500 jobs lost in 1982 and no new jobs created between 1983 and 1985; in fact, the jobs created did not

Table 2.3
Employment Fluctuations by Size of Company
All Sectors Except Public Service
Quebec, 1978 to 1985

Year	Size of Company			
	Number of Employees			
	1-19	20-99	100-499	500 et +
	Total Employment (in thousands)			
1978	397,5	381,9	392,9	973,8
1979	412,8	392,2	402,6	995,9
1980	427,3	392,2	398,0	1 047,0
1981	439,3	391,4	399,1	1 045,5
1982	427,8	358,8	369,5	969,0
1983	447,7	359,0	352,7	890,0
1984	478,4	399,8	381,7	952,1
1985(1)	530,4	416,7	389,3	952,6
	Fluctuations (in thousands)			
1978-1979	15,3	10,9	9,7	22,1
1979-1980	14,5	0,0	-4,6	51,1
1980-1981	12,0	-0,8	1,1	-1,5
1981-1982	-11,5	-32,6	-29,6	-76,5
1982-1983	19,9	0,2	-16,8	-79,0
1983-1984	30,7	40,8	29,0	62,1
1984-1985	52,0	16,9	7,6	0,5
	Fluctuations (percentage)			
1978-1979	3,8	2,9	2,5	2,3
1979-1980	3,5	0,0	-1,1	5,1
1980-1981	2,8	-0,2	0,3	-0,1
1981-1982	-2,6	-8,3	-7,4	-7,3
1982-1983	4,7	0,1	-4,5	-8,2
1983-1984	6,9	11,4	8,2	7,0
1984-1985	10,9	4,2	2,0	0,0

1. The jobs presented are those reported in 1985 by companies classified according to size in 1984.

Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status (revised edition).

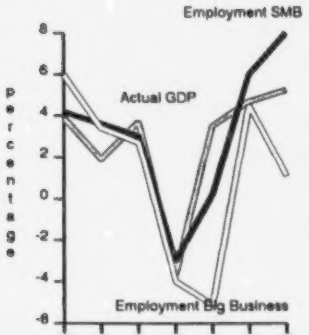
Compiled by the Direction des études sectorielles, DGRP, MIC.

even compensate for the losses of 1982 and 1983.

Small and medium-sized business (SMB) on the whole and, more specifically, small companies reported performances that are clearly superior to that of big business. They weather recessions better, adapt immediately to economic fluctuations, recover more rapidly and grow faster during expansion periods. They also create more jobs.

Graph 2.3

Growth Rate of the Actual GDP and of Employment for All Sectors Except Public Service
Canada
1979-1985



Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987; compiled by the Direction des études sectorielles, DGRP, MIC.

As Table 2.4 and Graph 2.3 show, small and medium-sized businesses (SMB) in Canada generally react to fluctuations in the economy the same way their counterparts in Quebec do. They weather recession better, having lost only 3% of their manpower as opposed to 3.9% in big business, and resumed creating jobs in 1983 while big business only emerged from the crisis in 1984. Thus, job creation since the 1982 crisis has depended mainly on small and medium-sized business (SMB) and especially on small companies with fewer than 20 employees, which created almost all the new jobs (Table 2.5).

Nevertheless, if we compare the data for Quebec and Canada, it is clear that in a recession, the performance of Quebec business is substantially poorer on the whole than that of competitors in other provinces. For instance, during the 1982 crisis, approximately 101,100 jobs were lost by SMB in Canada, with close to 44,300 of these in Quebec, or 43.8%, whereas Quebec's share of employment was only 24.8% in 1981. The same conclusions and proportions apply to big business.

However, during the recovery period, Quebec's SMB showed a much more marked vitality. Thus in 1983, while only 13,000 jobs were to be had in small and medium-sized businesses in Canada, Quebec's SMB created 20,500 jobs. Throughout the growth period, SMB in Quebec accounted for 32% of the net job creation which means 25.2% of all jobs in Canadian small and medium-sized business (SMB) in 1983.

Table 2.4
Employment[*] and Employment Fluctuations
Small and Medium-Sized Business
Canada, 1978 to 1985

Years	Total Employment		Net Fluctuations in Number of Jobs		Fluctuations Percentage		Fluctuations in the GDP
	In thousands		In thousands		%		%
	SMB	BB	SMB	BB	SMB	BB	
1978	3 018,5	5 167,1	–	–	–	–	–
1979	3 144,1	5 475,5	125,6	308,4	4,2	6,0	3,9
1980	3 253,2	5 662,0	109,1	186,5	3,5	3,4	1,8
1981	3 353,3	5 809,7	100,1	147,7	3,1	2,6	3,7
1982	3 252,2	5 582,4	-101,1	-227,3	-3,0	-3,9	-3,5
1983	3 265,2	5 295,2	13,0	-287,2	0,4	-5,1	3,5
1984	3 468,7	5 544,0	203,5	248,8	6,2	4,7	4,9
1985(1)	3 751,9	5 622,8	283,2	78,8	2,2	1,4	5,5

[*] All sectors except Public Service.

1. The jobs presented are those reported in 1985 by companies classified according to their size in 1984.

Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 2.5
Employment Fluctuations by Size of Company
All Sectors Except Public Service
Canada, 1978 to 1985

Year	**Size of Company**			
	Number of Employees			
	1-19	20-99	100-499	500 et +
	Total Employment (in thousands)			
1978	1 617,1	1 401,4	1 389,7	3 777,4
1979	1 675,4	1 468,7	1 463,5	4 012,0
1980	1 746,9	1 506,3	1 487,0	4 175,0
1981	1 820,6	1 532,7	1 509,8	4 299,9
1982	1 792,4	1 459,8	1 442,9	4 139,5
1983	1 841,8	1 423,4	1 375,6	3 919,6
1984	1 933,0	1 535,7	1 469,8	4 074,2
1985(1)	2 143,9	1 608,0	1 510,9	4 111,9
	Fluctuations (in thousands)			
1978-1979	58,3	67,3	73,8	234,6
1979-1980	71,5	37,6	23,5	163,0
1980-1981	73,7	26,4	22,8	124,9
1981-1982	-28,2	-72,9	-66,9	-160,4
1982-1983	49,4	-36,4	-67,3	-219,9
1983-1984	91,2	112,3	94,2	154,6
1984-1985	210,9	72,3	41,1	37,7
	Fluctuations (percentage)			
1978-1979	3,6	4,8	5,3	6,2
1979-1980	4,3	2,6	1,6	4,1
1980-1981	4,2	1,8	1,5	3,0
1981-1982	-1,5	-4,8	-4,4	-3,7
1982-1983	2,8	-2,5	-4,7	-5,3
1983-1984	5,0	7,9	6,8	3,9
1984-1985	10,9	4,7	2,8	0,9

1. The jobs presented are those reported in 1985 by companies classified according to size in 1984.

Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status. (revised edition)

Compiled by the Direction des études sectorielles, DGRP, MIC.

2.2.2 - Sectorial Development

There are three dominant sectors among Quebec's small and medium-sized businesses, namely personal and commercial services (32%), the retail trade (20%) and the manufacturing industries (18%). Statistical analysis will demonstrate the respective vitality of each of the sectors between 1978 and 1985; we will not linger on this point therefore. The objective here is to discuss the evolution of these various sectors according to the recession and expansion phases observed over the same period. Table 2.6 presents the relative and absolute variations in employment from 1981 to 1982 (crisis year), then for 1983 through 1985 (growth years). The conclusion is that, during the recession in Quebec, all sectors recorded drops in manpower requirements with the exception of the intermediate financial sectors which were recovering from the 1981 stock market crisis at the time. The first thing to note is that sectorial identity affects fluctuations in employment substantially more than the size of the company does. For instance, a company in a sector in serious decline will experience a drop in manpower and, conversely, a company in a more resistant sector of activity will lose relatively fewer jobs, regardless of whether it is a small and medium or large-sized company. Nevertheless, sectorial trends apart, small and medium-sized businesses display more resistance in a crisis than big business does, in almost all sectors. The sole exception is the transportation and communications sector, where big business loses relatively fewer jobs than SMB does.

The sector most seriously affected by the crisis was the manufacturing industry which, with 58,600 jobs lost, accounted for 39% of the overall job losses. Next comes construction, and everyone is aware of the volatility of employment in this sector as well as its sensitivity to economic fluctuations. In both cases especially, small and medium-sized businesses (SMB) weathered the crisis substantially better, all things being equal, than big business did. The drop in manpower was estimated at 11.7% for SMB as opposed to 22.2% for large companies in the construction industry, and 7.5% and 11.2% respectively in the manufacturing industry.

The sectors that weathered the crisis best were the financial services and the personal and commercial services sectors, most probably, because demand in both these sectors is less elastic than it is for manufactured goods. The drop in demand was relatively smaller in their case, thus permitting them to maintain employment levels.

Across Canada, the crisis was felt less sharply than it was in Quebec. In all sectors, relative job losses were lower, although the trends described earlier were borne out. Job losses were proportionally lower among small and medium-sized businesses (SMB). The sector most seriously affected was the manufacturing industry, which reported 52.5% of the job losses.

Table 2.6
Employment Fluctuations During Recession and Expansion Phases
Small and Medium-sized Business and Big Business
Quebec and Canada

Sectors	RECESSION PHASE(1)				EXPANSION PHASE(2)			
	Fluctuations for 81		Net Fluctuations		Fluctuations for 82		Net Fluctuations	
	Quebec	Canada	Quebec	Canada	Quebec	Canada	Quebec	Canada
	%	%	000	000	%	%	000	000
Manufacturing								
SMB	-7,5	-5,8	-12,2	-28,7	11,3	12,3	16,9	57,8
Big Business	-11,2	-9,3	-46,4	-144,1	-4,3	-2,4	-15,9	-34,0
Construction								
SMB	-11,7	-10,6	-7,1	-32,3	44,6	22,5	23,9	61,4
Big Business	-22,2	-10,8	-6,1	-18,2	-5,6	-25,7	-1,2	-38,6
Transportation and Communications								
SMB	-6,8	-4,8	-2,6	-7,4	11,7	10,1	4,2	15,0
Big Business	-5,5	-3,7	-8,5	-22,1	-9,7	-7,0	-14,1	-40,9
Wholesale Trade								
SMB	-8,4	-4,3	-7,4	-14,5	-12,3	8,9	10,0	28,9
Big Business	-10,3	-5,5	-9,3	-26,5	-1,1	5,1	-0,9	23,6
Retail Trade								
SMB	-4,0	-2,4	-6,6	-15,2	21,6	15,2	33,9	93,9
Big Business	-8,2	-2,7	-9,7	-16,7	22,9	5,2	24,8	32,1
Financial Intermediairies								
SMB	1,0	2,2	0,4	3,8	15,3	14,1	6,5	24,4
Big Business	-2,5	-1,2	-2,5	-5,3	-2,8	2,2	-2,7	9,5
Personal and Commercial Services								
SMB	-2,8	0,3	-7,2	3,6	23,6	17,0	57,9	189,2
Big Business	-3,7	1,1	-19,2	19,2	3,5	5,6	17,4	100,3
All Sectors* Except Public Service								
SMB	-5,3	-3,0	-44,3	-101,1	20,4	15,4	160,7	499,7
Big Business	-7,3	-3,9	-106,1	-227,3	3,4	0,8	2,9	40,4

(1) 1981-1982.

(2) 1983 to 1985.

* Including primary industries, mines, quarries and oil wells, as well as unclassified companies.

Source: Statistique Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

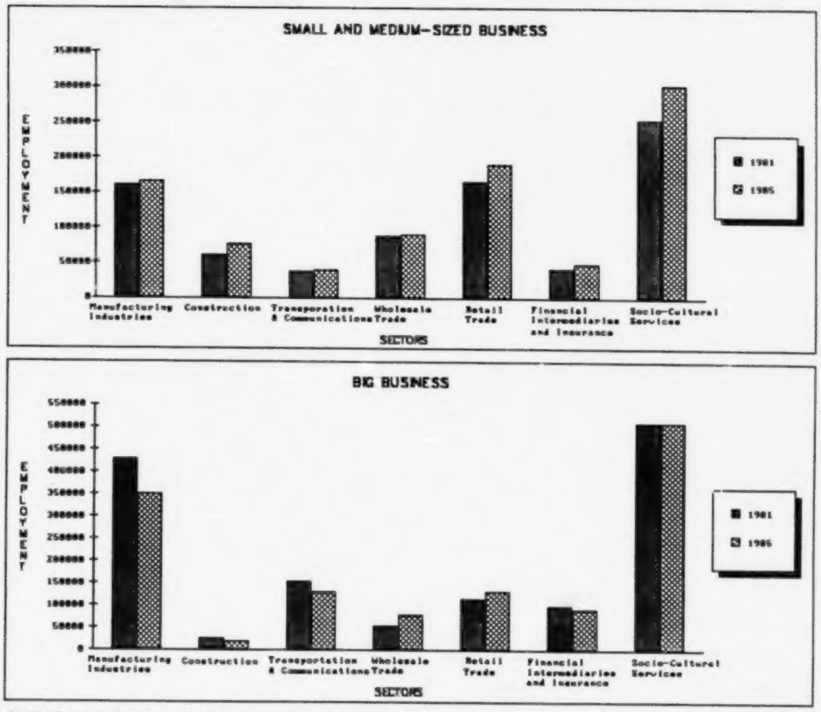
However, the wholesale and retail trade sectors registered very poor performance as well, far worse than in Quebec. On the other hand, like Quebec, financial services and personal and commercial services withstood the crisis very well, with an excellent performance put in by the latter sector, which not only lost no jobs in 1982 but created approximately 23,000 new ones.

As shown in the graphs in Appendix 1 on the comparative annual fluctuations in the GDP and in employment by sector, small and medium-sized businesses (SMB), notably those in Quebec, are more sensitive to fluctuations in the economy. They adapt immediately to changes in the GDP and began creating new jobs in 1983, unlike big business which experienced a delay before resuming its relative growth. On the national scale, the sensitivity of SMB is less marked than it is in Quebec. In most cases, employment continued to decline in 1983, although at a slower pace, but it took until 1984 for job creation to occur. One exception: the construction industry which adapts perfectly to economic fluctuations. The financial sector, on the other hand, is far more a reflection of stock market activities. The heaviest job losses therefore occurred in 1981.

In an expansion phase, namely between 1983 and 1985, small and medium-sized businesses (SMB) in almost all sectors have been known to create far more jobs than big businesses, with the exception of the retail trade in which the vitality of big business is comparable to that of SMB. If one compares the total number of jobs created between 1983 and 1985 by both SMB and big business in Quebec, what emerges is that SMB created approximately 47 times more jobs than big business did. The small and medium-sized businesses that create the most jobs are in the personal and commercial services sector (57,900) and the retail trade (33,900), closely followed by the construction industry (23,900). As for big business, it continued, despite the economic recovery, to lose jobs in five sectors, namely the manufacturing industry, which is having a great deal of trouble recovering from the crisis, the transportation and communications industry, the financial intermediaries, construction, and the wholesale trade. The greater vitality of small and medium-sized business (SMB) has resulted in the fact that, in 1985, SMB in all sectors had regained or surpassed their pre-Recession employment level (See Graph 2.4). Big business, on the other hand, has yet to regain its former stature.

The same trends can be observed across Canada: small and medium-sized business (SMB) creates jobs in all sectors and in consistently larger proportions than big business. Nevertheless, as the graphs in Appendix 2 show, Canadian SMB does not react immediately to fluctuations in the GDP. In many sectors, especially in the manufacturing and in the wholesale and retail sectors, small and medium-sized businesses displayed a certain sluggishness with regard to job creation after

Graph 2.4: Number of Jobs per Sector, Small and Medium-Sized Business and Big Business. 1981-1985



SOURCE: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987
Compiled by the Direction des études sectorielles, DGRP, MIC.

the crisis. On the other hand, Canadian big business exhibited more vitality than its counterpart in Quebec. After breakdown, the difference between the number of jobs created by SMB and those created by big business is therefore less marked than it is in Quebec, even if SMB creates 12 times more jobs than big business does. As in Quebec, the most dynamic sectors are the personal and commercial services sectors and the retail trade.

2.3 - Fluctuations in Employment by Size and Life Cycle of the Company

We have seen that employment weathered the crisis better in SMB than in big business and that it also resumed growing earlier. However, the data employed did not reveal the origin of the jobs created. Were they created by new companies or expanding companies? Furthermore, the data did not offer a clear distinction between employment due to the vitality of the small and medium-sized business (SMB) classed as such before the crisis and the added jobs from large companies reclassified as SMB after the crisis. We therefore resolved to analyze annual job creation between 1981 and 1984 according to the data from the longitudinal study provided in the Statistics Canada paper on job creation. As a result, it was easy to classify the jobs created over the year according to the phases of a company's life cycle. As for the reclassified jobs, these will emerge as a result of the following methodology: the data supplied shows employment for the year (t) and the year (t + 1) according to the size of the company in year (t). A is the total employment for the year (t + 1). Then we have employment for the year (t + 1), but according to the company classification for that year (t + 1). Call this total B. The difference between the two amounts (B-A) is the result of changes in size of business.

Such comparisons are, however, only possible on an annual basis because the companies are reclassified accordingly. However, this presents no problem for the purposes of analyzing job creation in a recession, since the crisis only lasted a year. However, our study of the expansion phase will be limited to annual analyses because there is no data available for longer periods.

2.3.1 - Evolution in a Recession Phase

We saw in the preceding section that the Recession affected all businesses, regardless of their size, although small and medium-sized business (SMB), especially small companies with fewer than 50 employees, withstood the crisis much better than big businesses did. Table 2.7 summarizes the situation. It also shows that job losses during the period were almost always due to labour cutbacks in companies that remained active throughout the period (C-D). The percentage increased with the size of the company: 91% in small and medium-sized businesses (SMB) and 98% in large. Conversely, the relative proportion of jobs lost due to company closures and that were not replaced by new companies is worse in

Table 2.7
Fluctuations in Total Employment (1) by Size of Company (000)
All Sectors Except Public Service
Quebec, 1981 and 1982

	TOTAL	SMB	LARGE	SIZE OF COMPANIES			
				NUMBER OF EMPLOYEES			
		(- 100)	(100 +)	1-49	50-99	100-499	500 et +
1981	2 275,3	830,7	1 444,6	660,3	170,4	399,1	1 045,5
FLUCTUATIONS (1981-1982)							
A. New Business	54,0	37,0	17,0	33,0	4,0	6,9	10,1
B. Closures	(60,5)	(41,2)	(19,3)	(35,2)	(6,0)	(10,3)	(9,0)
Balance (A - B)	(6,5)	(4,2)	(2,3)	(2,2)	(2,0)	(3,4)	1,1
C. Expanding companies	110,1	76,8	33,3	67,5	9,3	16,4	16,9
D. Declining companies	(253,8)	(118,7)	(135,1)	(95,9)	(22,8)	(45,2)	(89,9)
Balance (C - D)	(143,7)	(41,9)	(101,8)	(28,4)	(13,5)	(28,8)	(73,0)
Net Fluctuations: in number	(150,2)	(46,1)	(104,1)	(30,6)	(15,5)	(32,2)	(71,9)
in percentage	(6,6)	(5,5)	(7,2)	(4,6)	(9,1)	(8,1)	(6,9)
1982 (according to size in 1981)	2 125,1	784,6	1 340,5	629,7	154,9	366,9	973,6
1982 (according to size in 1982)	2 125,1	786,6	1 338,5	631,6	155,0	369,5	969,0
Reclassified labour (2)	0,0	2,0	(2,0)	1,9	0,1	2,6	(4,6)

(1) Employment is based on man/years.

(2) 1982 employment (according to company size in 1982) minus 1982 employment (according to company size in 1981).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

the small and medium-sized business (SMB) category, thus proving its greater economic fragility. This applies mainly to medium-sized companies (50 to 99 employees) which registered the poorest performance in terms of the creation and disappearance of companies, just as they reported the worst performance in terms of relative job losses.

On the whole however, most companies reacted to the crisis by cutting back their personnel. It is therefore logical that some of them may have changed size and ended up in a different category at the end of the year. If we compare the 1982 employment data for both classifications, we obtain the total reclassified manpower. What emerges is that certain large companies appear to have slid back into the small and medium-sized category. For instance, SMB in 1981 reported only 784,600 jobs at the end of the year, whereas according to the 1982 classification, they accounted for 786,600 jobs. Another 2,000 jobs were therefore added (approximately 0.2%) as a result of large companies changing category.

The very large companies (500 employees or more) were the worst hit by this reclassification, with 4,600 jobs lost, whereas large companies (100 to 499 employees) and small businesses (fewer than 50 employees) reported increases in manpower. Given the available information, it is impossible to establish a direct tie between groups or to conclude that the very large companies cut back so many of their staff that they were reclassified as small companies. There was most likely a general cutback on labour, which led to a downward reclassification for many companies.

However, such transfers are marginal, barely 0.2% and therefore do not affect the results reported in Section 2. Regardless whether the figures stem from employment before or after reclassification, small and medium-sized businesses (SMB) exhibited better resistance to the crisis than big businesses did and they owe this to their own resources.

The same phenomenon was observed at the national level, but also very marginally. There was a clear transfer of employment from large companies to small and medium-sized companies (15,300 jobs), but this represents an increase of barely 0,09% in the manpower employed in SMB compared to the total number of jobs based on the 1980 classification of companies (Table 2.8)

2.3.2 - Evolution in an Expansion Phase

When the economy recovered in 1983, only small businesses with fewer than 50 employees showed a positive balance in terms of job creation (41,500 jobs over the year) (See Table 2.9). These small businesses were also the only ones where jobs offered by new companies compensated for jobs lost due to closures (+ 9,900 jobs). They are also the only ones to display positive job creation results in companies that managed to maintain their activity

Table 2.8
Fluctuations in Total Employment (1) by Size of Company (000)
All Sectors Except Public Service
Canada, 1981 and 1982

	TOTAL	SMB	LARGE	SIZE OF COMPANIES			
				NUMBER OF EMPLOYEES			
		(- 100)	(100 +)	1-49	50-99	100-499	500 et +
1981	9 163,0	3 353,3	5 809,7	2 689,3	664,0	1 509,8	4 299,9
FLUCTUATIONS (1981-1982)							
A. New Business	194,2	146,5	47,7	131,3	15,2	23,0	24,7
B. Closures	(201,9)	(149,9)	(52,0)	(130,0)	(19,9)	(32,0)	(20,0)
Balance (A - B)	-7,7	(3,4)	(4,3)	1,3	(4,7)	(9,0)	4,7
C. Expanding Companies	596,4	386,7	209,7	337,9	48,8	88,2	121,5
D. Declining Companies	(917,0)	(469,0)	(448,0)	(386,5)	(82,5)	(159,9)	(288,1)
Balance (C - D)	(320,6)	(82,3)	(238,3)	(48,6)	(33,7)	(71,7)	(166,6)
Net Fluctuations: in number	(328,3)	(85,7)	(242,6)	(47,3)	(38,4)	(80,7)	(161,9)
Net Fluctuations: in percentage	(3,6)	(2,6)	(4,2)	(1,8)	(5,8)	(5,3)	(3,8)
1982 (according to size in 1981)	8 834,7	3 267,6	5 567,1	2 642,0	625,6	1 429,1	4 138,0
1982 (according to size in 1982)	8 834,7	3 252,3	5 582,4	2 619,8	632,5	1 442,9	4 139,5
Reclassified labour (2)	0,0	(15,3)	15,3	(22,2)	6,9	13,8	1,5

(1) Employment is based on man/years.
(2) 1982 employment (according to company size in 1982) minus 1982 employment (according to company size in 1981).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 2.9
Fluctuations in Total Employment (1) by Size of Company (000)
All Sectors Except Public Service
Quebec, 1982 and 1983

		SMB	LARGE	SIZE OF COMPANIES			
	TOTAL			NUMBER OF EMPLOYEES			
		(- 100)	(100 +)	1-49	50-99	100-499	500 et +
1982	2 124,9	786,4	1 338,5	631,4	155,0	369,5	969,0
FLUCTUATIONS (1982-1983)							
A. New Business	58,4	47,1	11,3	43,0	4,1	7,0	4,3
B. Closures	(58,4)	(38,2)	(20,2)	(33,1)	(5,1)	(11,4)	(8,8)
Balance (A - B)	0,0	8,9	(8,9)	9,9	(1,0)	(4,4)	(4,5)
C. Expanding Companies	147,7	105,1	42,6	93,7	11,4	17,9	24,7
D. Declining Companies	(223,2)	(88,3)	(134,9)	(72,0)	(16,3)	(39,5)	(95,4)
Balance (C - D)	(75,5)	16,8	(92,3)	21,7	(4,9)	(21,6)	(70,7)
Net Fluctuations: in number	(75,5)	25,7	(101,2)	31,6	(5,9)	(26,0)	(75,2)
in percentage	(3,6)	3,3	(7,6)	5,0	(3,8)	(7,0)	(7,8)
1983 (according to size in 1982)	2 049,4	812,1	1 237,3	663,0	149,1	343,5	893,8
1983 (according to size in 1983)	2 049,4	806,7	1 242,7	652,3	154,4	352,7	890,0
Reclassified labour (2)	0,0	(5,4)	5,4	(10,7)	5,3	9,2	(3,8)

(1) Employment is based on man/years.
(2) 1983 employment (according to company size in 1983) minus 1983 employment (according to company size in 1982).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

throughout the period (+ 21,700) jobs. During the Recovery phase, job creation therefore depended on SMB. It is notable moreover that this vitality is characteristic of SMB and is not due to reclassification of companies following a drop in manpower. On the contrary, a comparison of the reclassified manpower at the end of the year reveals that companies with fewer than 50 employees transferred to higher categories, accounting for some 20,600 jobs.

Conversely, very large companies (+ 500 employees), as a result of major losses of manpower, tended to slide into lower categories, very likely into the 100-499 employee bracket. Table 2.9 shows that reclassification was especially favorable to big business, demonstrating that the vitality observed in small and medium-sized companies is very real and is due entirely to their own resources.

When expansion began in 1984, all categories of companies created new jobs, but it was again small business (-50 employees) that proved the most dynamic on all levels: job creation by new companies, overall opening and closing of companies, jobs in expanding companies, and overall job creation (Table 2.10). At an aggregate level, the number of transfers from SMB to big business categories total 30,800 jobs, or 3.4% of the employment in the SMB category before reclassification. The vitality observed in Section 2 is therefore confirmed and even amplified by this new data. The results are similar for Canada (See tables in Appendix 3). We may therefore conclude that the effects of reclassification in no way jeopardize the results obtained with regard to the vitality and resistance of small and medium-sized businesses (SMB) during expansion and recession phases. On the contrary, the vitality of SMB in an expansion phase was even undervalued in Section 2, since we used the data compiled after reclassification, namely after the number of jobs in small and medium-sized businesses (SMB) had declined.

2.4 - Conclusion

We observed the respective behaviors of small and medium-sized businesses and big businesses during both a recession phase and an expansion phase. The conclusions are therefore limited to these periods. Nevertheless, the results corroborate others obtained by other authors. They are therefore entirely reliable, despite the limited scope of our study.

Small and medium-sized businesses (SMB) on the whole have a better performance record in the area of employment than big businesses do. They lose proportionately fewer jobs during a Recession, they react immediately to recovery and their growth is consistent. Small and medium-sized business (SMB) is a determining factor in job creation and is rock solid when the economy deteriorates. Nevertheless, this statistical reality should not overshadow the fact that employment in these companies is highly unstable. Suf-

Table 2.10
Fluctuations in Total Employment (1) by Size of Company (000)
All Sectors Except Public Service
Quebec, 1983 and 1984

		SMB	LARGE	SIZE OF COMPANIES			
	TOTAL			NUMBER OF EMPLOYEES			
		(- 100)	(100 +)	1-49	50-99	100-499	500 et +
1983	2 049,6	806,9	1 242,7	652,5	154,4	352,7	890,0
FLUCTUATIONS (1983-1984)							
A. New Business	65,0	47,5	17,5	42,5	5,0	9,1	8,4
B. Closures	(66,5)	(39,5)	(27,0)	(35,1)	(4,4)	(12,3)	(14,7)
Balance (A - B)	(1,5)	8,0	(9,5)	7,4	0,6	(3,2)	(6,3)
C. Expanding Companies	265,0	152,9	112,1	132,4	20,5	41,6	70,5
D. Declining Companies	(101,1)	(58,8)	(42,3)	(50,2)	(8,6)	(15,5)	(26,8)
Balance (C - D)	163,9	94,1	69,8	82,2	11,9	26,1	43,7
Net Fluctuations: in number	162,4	102,1	60,3	89,6	12,5	22,9	37,4
in percentage	7,9	12,7	4,9	13,7	8,1	6,5	4,2
1984 (according to size in 1983)	2 212,0	909,0	1 303,0	742,1	166,9	375,6	927,4
1984 (according to size in 1984)	2 212,0	878,2	1 333,8	705,3	172,9	381,7	952,1
Reclassified labour (2)	0,0	(30,8)	30,8	(36,8)	6,0	6,1	24,7

(1) Employment is based on man/years.
(2) 1984 employment (according to company size in 1984) minus 1984 employment (according to company size in 1983).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

fice to consider the large number of jobs that have disappeared following company closures. Although the jobs created in new companies compensate partially for the loss, the high rate of company closures among SMB merely underlines their fragility.

Moreover, the strong resistance displayed by small and medium-sized business (SMB) is largely owing to the flexibility of their staff, which is mostly non-unionized and low paid and will more willingly accept wage cutbacks to avoid layoffs. The often personalized way of handling labour relations in small and medium-sized companies, which is different from the more frequent collective bargaining in big business, helps maintain a certain level of employment.

Small and medium-sized business in general, because of its flexible management, adapts better to events than big business does. But should they really be compared? Their scope of activity, their production modes, their markets are all different. In fact, these two types of business are complementary rather than competitive and SMB are very often even dependent on big business if only for their sub-contracts. Both are indispensable to the economic growth of Quebec.

Chapter 3

Worker Participation in Quebec Business

In Quebec, worker participation occurs in both corporate and cooperative businesses. There are various reasons why worker participation developed in both commercial business and the cooperative system: job preservation, job creation, testing new operating systems as a reaction to the traditional kind of operation which can be categorized as an "employer-employee" relationship, even the search for a new working style based on principles borrowed from ecologism and the soft technologies, to mention but a few.

This chapter reports on the status of worker participation in business. The information on worker participation in corporate businesses in Quebec was drawn from a report by the Commission consultative sur le travail entitled "La participation des travailleurs dans l'entreprise" published in 1986. This part of the article outlines the main elements of the report and consequently refers the reader to the report itself for a discussion of methodological aspects.

Next, Quebec's cooperatives are profiled as tools of economic development. The role of the worker in the cooperatives is put into perspective and future prospects are defined, bearing in mind that the aim of the cooperative is the democratization of the economy, shared ownership and the distribution of the resulting income.

3.1 - Participation In Corporations

3.1.1 - General Outline

3.1.1.1 - The Facts

In Quebec, worker participation in business implies a whole universe of startling achievements, deep-rooted beliefs and profound contradictions. While experts and politicians have been talking, men and women of action in companies, unions and the public service have been experimenting with more or less elaborate forms of participation, though these have always been coloured or inhibited by a relatively inappropriate legislative and fiscal context. In spite of some unfortunate schoolboy quarrels, the experiments have continued to increase in number.

As a result of these new experiences, a number of formulas for worker participation in business have appeared in Quebec: joint committees, new forms of work organization, profit sharing, dividends, employee stock-saving plans, circles of quality, co-ownership and even complete control of the company. These variations in participation have developed mainly in the manufacturing sector, specifically the textile, wood, furniture, paper, transportation equipment, electrical products, chemical products and food industries.

Yet aside from all these formulas, one may well wonder whether, in fact, worker participation in a company, and more specifically the co-management formula, is not merely a reaction to the difficult economic times of the '70s and, on the threshold of the '80s, an attempt to secure a reprieve for companies condemned by the general crisis and the partial cutbacks in the softest sectors of Quebec industry.

Generally speaking, with respect to both the simpler forms of worker participation and the co-management formula, participation has a positive impact on employment, productivity, job satisfaction, working conditions and labour relations.

For instance, in companies where forms of participation in management have been noted, 62% confirmed that they have observed an improvement in productivity and 67% have detected an increase in satisfaction. Productivity has apparently increased as a result of job "redesign" programs and profit sharing. Job rotation appears to be the most effective mechanism with respect to worker satisfaction.

Companies mainly began to introduce participation in management mechanisms after 1975. The late 70's proved favourable to the development of joint committees, new forms of work organization, and profit sharing, whereas the early '80s have led mostly to productivity committees (circles of quality) and stock ownership plans.

There also appears to be a positive correlation, in most cases of co-management, between participation and improved company performance. Implementation of co-management formulas in companies engaged in consolidation or recovery encourages a favourable prognosis. In fact, the company's continued activity generates an energy that impacts many of the functional aspects of the enterprise. Among other things, the hope of keeping one's job, and not only co-management or access to shareholder status is what leads workers to be more productive, less demanding and more flexible with regard to management policies.

Quebec's experiences with participation in management appear to be varied and relatively unrelated to such structural characteristics as size, location, sector of activity or union status. These experiences are more likely due to employer initiative and do little to modify the worker's status in the company. On the other hand, the most recent experiences, especially those that go beyond simple participation in management to resemble shared ownership, appear to be headed towards industrial democracy.

The most recent experiences with co-management have tended towards forms of participation in management. In fact, the closer we come to the present, the more the workers' share in the ownership, management and results of the company have declined in importance. Therefore, while worker participation in business appears to be spreading in Quebec, it is also declining in intensity. Cases where the employee share in the ownership, management and results of a company is significant seem to be rarer today than they were in the 1970s; on the other hand, we have observed a renewed enthusiasm for individual stock ownership among workers, for new forms of work organization, and for circles of quality. While the quality of the earlier formula is undeniable, the latter forms of worker participation represent very promising avenues for the growth of business. Nevertheless, there is more than one obstacle to such expansion.

3.1.1.2 - The Constraints on Participation

The objective constraints that have burdened Quebec's experiments with participation are of a legal, financial, organizational and cultural nature.

a) The Legal Aspects

The legislative context in both Canada and Quebec remains ill adapted to experiments in co-management. Legal aspects connected with Quebec's co-management experiences include the protection of minority shareholders' rights, the Labour Code definition of employee, and preservation of the private status of corporations with more than 50 shareholders. The partners do not have specific mechanisms for dealing with these last two problems; they adapt to the circumstances. With respect to protecting minority shareholders, the experiments that have been most successful are those that focus on the workers' collective, with apparently positive technical and strategic results, although they do generate a certain administrative unwieldiness as well as cultural and social constraints.

It is primarily by improving the organization of their collective interests that workers will begin to master the uncertainties born of these legal constraints and thus gain more control over the start-up and development of their participative experience.

b) The Financial Aspects

The financial constraints pertain to the availability of capital, to personal risk and to the method of disposing of shares. The availability of capital is not only a problem in the early stages of participation. It can pose a problem throughout the experience, during the sale of assets, mergers or expansion operations. Another problem connected with the availability of capital concerns young workers, who are often unable to buy back the shares of the older retiring employees. A third problem is of great concern to the employees of companies where worker participation already exists; namely the actual value of the shares they hold.

c) The Organizational and Technical Aspects

The organizational and technical facets of developing participation experiments can relate to any number of aspects of the company. They pertain to equipment, to the organization of work and to the resulting relationship of "cooperation-opposition".

The precarious position of co-managed companies allows little scope for large-scale technical re-organization, or for experimentation with new forms of work organization. Not only does the old technology rarely allow any form of re-organization of work, its lack of reliability given the age of the machinery imposes an often firmer style of work, of service-maintenance and authority, than the traditional company does. The rapport between this authoritarian structure of production and a new management structure that is formally more egalitarian gives rise to a series of cultural constraints that either inhibit or limit the development of these experiences.

d) The Cultural Aspects

The corporate enterprises that we examined were, from the outset, subject to enormous objective constraints in terms of the opacity of legal regulations, the uncertainty of financing, and the inadequacies of the production machine. It is perhaps normal that old cultural habits should resurface and inhibit the development of a participative subjectivity that will give rise to a new business culture.

3.1.1.3 - Recommendations

Concrete action can be taken to keep constraints on the development of worker participation in the company to a minimum.

1. Modernization of the Quebec Loi sur les compagnies should be stepped up in order to offer better protection for minority shareholders.

2. The recommendations contained in the "Rapport sur la capitalisation de l'entreprise québécoise", regarding instituting a Régime de placement dans son entreprise (REPSE) in Quebec should be approved and implemented as soon as possible.

Myths About Worker Participation in Business

1. Participation keeps the peace in a company
2. Participation ensures that the company's growth will be planned
3. Participation redistributes the power in a company
4. Participation only works with cooperatives
5. Participation ensures competence within the company
6. Participation is only for certain sectors of society
7. Participation automatically leads to a better quality of life at work
8. Participation replaces unions
9. Participation tends to eliminate the structure of authority
10. Participation is favoured in the law
11. Participation exists only because of subsidies
12. Participation will lead the company to failure

3. The Commission des valeurs mobilières du Québec must agree to recognize SPEQs consisting of more than 50 workers as private companies for the purpose of investing in their own companies.

4. The limits imposed on the SPEQ and the REPSE must be expanded to allow workers a certain amount of leeway to diversify their investments, somewhat like the stipulations governing the Fonds de solidarité du Québec.

5. Shares in the Fonds de solidarité du Québec should continue to be supported and promoted by the State.

6. Research on the development of organizational culture in participative companies should be encouraged.

3.1.2 - The Faces of Participation

Participation has been part of the daily vocabulary of organizations for a number of years, both in Quebec and elsewhere. The notion of participation refers to cooperative practices or behaviour between the various partners in a company. In a broader sense, participation implies a willingness to act jointly, an open-minded attitude between these parties. On the one hand, participation in a company refers to the act by which individuals and groups in this organization join forces in the pursuit of a common objective; participation therefore implies taking part in the operation of the company. Furthermore, a situation in which individuals and groups are associated with others also represents participation; this time, participation is in the sense of "having a share" in the enterprise. Briefly, the notion of participation refers to **the act of taking part in the decision-making structure or, again, to any of the situations in which the various partners in the company have a share in the economic structure of the business.**

This definition of participation is reflected concretely in three fundamental elements of a company, namely management, results and ownership. **Participation in management** exists when workers have an impact on decisions relating to the operation of the company. On the other hand, **profit sharing** involves the distribution of surplus funds to workers and management. Finally, **participation in ownership** implies worker ownership of all or part of the capital in the company.

3.1.2.1 - Management

Participation in management often causes confusion. The reason is the very concept of management, which encompasses far too wide a variety of activities within a company. Indeed, every level of a company involves management activities, from the workshop to the board of directors. What is more, management itself implies a series of activities that are normally classified with the main functions of planning, organization, administration and control. Participation in management therefore refers to a whole range of different formulas, the common denominator being that the workers are included in the company's decision-making process. Elements of divergence in these formulas pertain to intensity, structural positioning, mode of organization, and the means of accessing participation in management (see Table 3.1).

For instance, with respect to intensity, participation in management depends on the amount of influence the workers have on the company's decision-making process. In this context, the various levels of participation are information, consultation, co-decision-making or co-management, as well as self-control or self-management. Further distinctions regarding participation can be found in the table describing the types of participation.

Joint plant or shop committees offer a good example of the most widespread mechanisms of participation in management in Quebec businesses. There are three types of joint committees: (1) the joint employer-union committees defined in the collective agreement; (2) the joint employer-employee committees determined by law; and (3) the joint employer-employee committees formed out of the workers' desire for participative management. The purpose of these committees is to involve workers in the company's decision-making process.

There are other mechanisms for having workers participate in the management of the work unit. These mechanisms mainly impact the structural elements of the work and the assignment of tasks. This form of participation results from introducing new forms of work organization that aim to involve workers in the programming and development of their duties, both in the plant and in the offices. Some of the most frequently employed techniques for reorganizing work are job rotation, job enlargement and job enrichment.

3.1.2.2 - Results

Participation in results refers to all forms of distributing the financial results of the company among the owners and workers. This is also a very complex category that is difficult to define in clear terms. The worker is participating in the results the moment he receives a share of the income or savings of the company, other than in salary form. The concept includes both profit sharing and the payment of dividends (if workers are shareholders), or returning more or less large portions of the costs saved by the workshop to the employees at different times of the year. There are many forms of expressing participation in results and they vary almost from one company to the next. Two major categories illustrate the forms of participation in the results.

The first category refers to the distribution of income realized from the return on investment: dividends and increased share value. The second category is associated with sharing the profit resulting from the improved performance of the workers or lower production costs; this includes all the profit sharing measures instituted by the company (bonuses). It is carried

Table 3.1
Types and Methods of Participation

Types and Methods	Participation in Management	Participation in Results	Participation in Ownership
Intensity	Information/consultation/ decision-making/self-control	Proportional to the distribution of profits	Minority/near parity/ majority/full
Structural Positioning	Strategy/organizational/ operational	Profits tied in with performance in the shop or plant	Voting/non-voting
Mode of Access	Direct/indirect	Immediate payment/ deferred Individual/collective	Immediate payment/ deferred Individual/collective
Mode of Organization	Instituted/not instituted Voluntary/compulsory	Profit Sharing Plan Instituted/not instituted	Equal distribution/ unequal distribution Instituted/not instituted

Source: Commission consultative sur le travail (1986).

out by means of a series of specific procedures based on general notions of intensity, structural positioning, modes of organization and of access, as presented in Table 3.1.

3.1.2.3 - Ownership

Participation in ownership is rooted in corporate law. The legal status of the owner affords him privileges regarding the administration and distribution of any surplus. Thus, participation in ownership leads to participation in management and in results.

This type of participation varies according to whether it applies to a private company or to a cooperative. In companies governed by corporate law, the proportion of the investment determines the share in the liabilities, as well as the share in any profits. In a cooperative enterprise, the stock ownership mechanism gives members-workers an opportunity to participate in the management on a "one person/one vote" basis, while the profits are divided pro rata the services received or the transactions carried out with the co-op (hours worked, for instance).

The intensity of the workers' participation in ownership depends on the percentage of their investment. It is expressed as stock ownership, co-ownership or full ownership. Stock ownership exists when workers purchase voting shares in the company where they work. Co-ownership or co-management implies a shared ownership, giving the workers-shareholders more weight than mere stock ownership does. Self-management or full ownership is the most advanced form of worker participation in a company: the workers are the sole owners of the company and are entirely responsible for its management.

The result of worker participation in either the management, the results or the ownership of a company is the humanization of work. In addition to the forms of so-called participation in "management", there is also the issue of industrial democracy, in which co-management and self-management are privileged avenues of worker participation. Participation in management often employs the same mechanisms as industrial democracy. What distinguishes the latter is the scope it assigns to participation, extending it to ownership, to management and to results; also its tradition is rooted in the gradual democratization of business rather than a desire to enhance management and productivity.

Thus, according to the Commission consultative sur le travail, worker participation in the areas of ownership, management and results represent forms of so-called "participation in management". If one or all of these forms of participation become very developed, it could lead to an industrial democracy in which co-management is the preferred form of participation.

3.1.3 - Participation in Management

Exploratory research has therefore been carried out in order to discover new trends in the management of Quebec business. The study was performed by a joint team involving the Institut national de la productivité (INP) and the Ecole des hautes études commerciales de Montréal (HEC). The 40 cases that were analyzed were classified as follows, according to their forms of participation (see Table 3.2):

3.1.3.1. - Overall Evaluation

Researchers reported seven different types of measures, themselves subdivided into species that establish specific new methods of managing human resources. The expression "types of measures" refers to various notions regarding remuneration, physical working conditions, organization of working time, of tasks, of communication, of participation in managerial bodies and on employer-employee committees (see Table 3.3).

A survey performed by means of questionnaires distributed to 624 enterprises yielded 308 responses. The survey confirmed the existence of numerous changes in business management: 256 companies introduced 1,242 measures in this field. Modifications to physical working conditions accounted for 36% of the overall measures introduced. Next came job modifications (15%), modifications to the organization of working time (13%) and to com-

Table 3.2
Breakdown of the Number of Cases Examined According to Mechanisms for Participation in Management

Mechanisms for Participation in Management	Number of Cases	Case Number (Appendix 5)
Joint committees	12	1.1 to 1.12
New forms of work organization	11	2.1 to 2.11
Profit sharing	5	3.1 to 3.5
Stock ownership	12	4.1 to 4.12

Source: Commission consultative sur le travail (1986).

Table 3.3
Classification of Management Innovations

Remuneration

- replacement of the hourly wage with a weekly or monthly salary
- profit sharing program
- stock purchasing program
- incentive sharing program

Physical Working Conditions

- job improvement
- reduction of physical effort
- improvement of rest areas, restaurant facilities, bathroom facilities
- improvement of esthetic environment
- introduction of physical fitness program

Organization of Working Time

- voluntary overtime
- shorter working hours
- flexi-time
- elimination of time clock
- job sharing program

Duties

- job enrichment
- job rotation
- task redesigning
- semi-autonomous group
- increased autonomy in the performance of duties

Communication

- employee information program
- suggestion box

Participation in Executive Bodies

- employee participation on the Board of Directors
- employee participation on the Executive Committee

Employer-Employee Committees

- productivity committee
- planning committee
- quality of life at work committee
- other joint committees not provided for by the law

Source: LEMELIN, Maurice and LAMOUREUX, Daniel, *Les changements dans l'organisation du travail. Quelques tendances.* 1984 (INP-HEC Research).

munication (12%). Finally, 8% of these measures concerned participation in management bodies, while 6% related to measures for implementing employer-employee committees.

It would seem that neither company size, nor its activity in a specific economic sector, nor again its union status has an impact on its propensity for modifying the company's organizational structure. According to the survey, 62% of the businesses that introduced measures declared that they had noticed an improvement in their productivity and 67% observed an increase in worker satisfaction.

The survey data relating to mechanisms of participation in management were isolated and 330 related measures were noted. According to this breakdown, changes observed with respect to new forms of work organization accounted for close to 57% of all measures resulting from a worker participation mechanism. Next came changes that allowed workers to participate on various joint employer-employee committees (25.8%). Finally, slightly less than one-fifth of the participation measures concerned profit sharing (12.7%) or stock ownership (4.5%).

3.1.3.2 - Various Formulas

Worker participation in the context of participation in management is expressed in various ways, depending on the workers' actual influence on the company. These forms of participation include joint committees, new forms of work organization, profit sharing and stock ownership.

a) Joint Employer-Employee Committees

The 12 experiments that were studied, 8 of which occurred in the Montreal area, proved positive. The framework for introducing joint committees presents little variation from one case to the next. Eleven of them were initiated in the last decade. These committees are mainly set up in companies that are restructuring their activities, whether in terms of management per se or of the actual organization of the work.

Ten of the companies concerned acknowledged the joint committees' contribution to improving communication and settling a number of "small problems" before they worsened. With respect to employment and working conditions, these experiences seem to have had little effect. They have proved particularly effective at the level of productivity and employee satisfaction. In fact, 9 out of the 12 companies examined reported an increase in productivity, while 5 of the companies reported an increase in worker satisfaction. With respect to labour relations, it was noted that the existence of a union does not influence the outcome of these experiments, as long as the union agrees to participate.

These experiments generally unfolded according to one of the following three story lines: the experiment leads directly to the achievement of a few specific objectives (productivity, quality control, etc.) and labour relations on the whole remain what they were; the experience yields surprisingly positive results but, after a certain amount of time, people run out of steam and the working climate deteriorates; the experience yields no results and the working climate remains what it was. It should be noted that joint committees are introduced under relatively healthy conditions: sound financial position and satisfactory labour climate.

b) New Forms of Work Organization

Some experiments with the quality of life at work focus on the socio-technical process of production. They are concerned with the restructuring of duties and attempt to establish an optimum type of work organization according to the demands of technology. In Quebec, the number of companies that are known to be experimenting with new forms of work organization seems to be more limited than in the previous case. Among the 11 companies analyzed, 8 of which are located in the Montreal area, 9 have shown positive results in terms of the organization of work. Four companies reported that the restructuring of tasks had helped increase employment. In 8 of the companies examined, an increase in remuneration along with an improvement in employee qualifications were attributed to new forms of work organization. What is more, 9 companies reported an increase in employee satisfaction and 10 of them, an increase in productivity.

Analysis of these 11 cases reveals that the introduction of new forms of work organization works better in small and medium-sized companies that are non-unionized and newly established.

c) Profit Sharing

Profit sharing, by virtue of which part of a company's profits are distributed to the workers, can take one of two forms depending on whether the workers derive immediate or long-term financial benefits. In this category, we include net profit sharing and incentive sharing plans as mechanisms for worker participation in the company's results, in which case the return is immediate. These profit sharing plans result in payment of part of the profits to the workers, in either cash or in stock.

The four companies that had set up net profit sharing plans were unanimous in their positive evaluation of the impact of profit sharing plans. Proof positive is that all four experiments have lasted at least six years and are still going on. The four companies reported the greatest improvement in the areas of productivity and worker satisfaction.

d) Stock Ownership

In North America, stock ownership has grown principally out of legislative provisions that offer tax incentives to employers and employees who participate in such plans.

In the United States, the introduction of stock ownership plans for workers has accelerated since 1974 as a result of a program designed to help workers participate in the ownership of their company. Commonly known as ESOP (Employee Stock Ownership Plan), the program, operating through a trust company, allows workers to convert part of their salary into company shares.

company. Business Week reports that over 6,000 ESOP programs have been introduced since 1974, representing approximately ten million American workers.

In Canada, few laws encourage stock ownership by workers. Deferred profit sharing plans (DPSP) are one exception. Quebec is, in fact, the only province with an incentive measure in this area: the Régime d'épargne-actions du Québec (REA) or Quebec Stock Savings Plan (QSSP). The law, passed in 1979, grants purchasers of stock a 20% income tax deduction, to a maximum of $20,000.

In fact, the Saucier Commission, in March 1984, proposed the creation of a Régime enregistré de placement dans son entreprise (REPSE), a measure inspired by the U.S. program (ESOP). The plan would enable owners and employees of companies not listed on the Stock Exchange to convert part of their savings into capital stock in their company and benefit from the same tax exemptions they would get if they were investing in a retirement savings or stock savings plan. However, the Ministre des Finances has announced the creation of another vehicle recommended by the Saucier Commission: the Société de placement dans l'entreprise québécoise (SPEQ). SPEQ are venture capital companies formed by small groups of shareholders in order to participate in economic projects or to invest in small and medium-sized businesses.

With respect to the number of Quebec companies offering their employees stock ownership plans, reports filed with the Commission des valeurs mobilières du Québec indicate that 71 companies received the authorization to issue shares to workers in 1983 and 1984. Furthermore, 46 companies registered with the QSSP have reserved part of the shares they issue for their employees. Roughly 10% of any one share issue will be reserved for the workers.

While stock ownership traditionally has been the preserve of management staff, the trend appears to be shifting, at least in the case of shared ownership plans registered with the QSSP. According to information provided by Lévesque, Beaubien, there are as many if not more stock ownership plans reserved for non-management workers as there are for management employees. Again according to Lévesque, Beaubien, approximately 4 out of 5 companies with assets over a billion dollars reserve shares for their non-management employees, whereas the proportion is 21 out of 41 in the case of companies with assets under a billion dollars.

Of the 12 companies studied – the majority of which are located in the Montreal area – which operate shared ownership plans for management and workers, 4 are listed on the stock exchange and 8 are not. The shared ownership plans in the four "public" companies seem mainly to have led to an increase in productivity. Also, union presence has relatively little impact on stock-ownership plans, even though unions are distrustful of such plans, especially when their more or less avowed objective is to replace the current salaries and fringe benefits. As for the "private" companies, the effect of the stock ownership plans is being felt both in terms of productivity and employee satisfaction. What is more, stock ownership in small businesses has little impact on labour relations. Being generally non-unionized, the workers remain subject to the authority of their employer.

3.1.4 - Industrial Democracy

In small and medium-sized industrial companies and, with greater reason, in large companies, co-management is the most frequent and most developed model of industrial democracy. Quebec businesses are no exception. Our examination of the forms of industrial democracy will therefore focus on co-management.

3.1.4.1 - Overall Evaluation

The statistical profile of co-management in Quebec is based on studies carried out jointly by heads of the PECEC (Programme expérimental de création d'emplois communautaires) and the Bureau de la statistique du Québec (BSQ). The companies participating in the PECEC are mostly located in the Montreal area and in the major resource areas of Quebec. According to PECEC data, 159 (73.9%) of the companies operating according to a participative formula are in the manufacturing sector (see Table 3.4). In 167 companies, the intensity of participation corresponds to less than 50% of the ownership and/or the profits; only 48 companies have exceeded this threshold. The BSQ and PECEC surveys had to be recompiled to uncover the "hard core" of co-management in Quebec, namely companies with over ten employees in which the workers own a significant proportion of the common voting stock. Thus, 40% of the "participative" companies in the PECEC reported similar figures.

A number of documentary sources were selected to track the evolution of co-managed companies, which allowed us to classify 34 companies. Our research covered three generations. Each of the generations reflects some of the dominant traits of co-management. Table 3.5 offers a breakdown of the co-managed companies according to generation. Among the 34 companies inventoried, 10 were founded in the early 1970s, 15 co-managed companies were set up between 1978 and 1982 and 9 companies have only existed since 1983. Seven cases of minority co-management have been observed, along with 6 cases of communal co-management, 10 cases of near parity co-management, 8 cases of majority co-management and 3 cases of self-management. A description of the progress of the co-managed companies during this period focuses on three points: the framework for implementa-

Table 3.4

Breakdown of Participative Companies Subsidized by the PECEC, According to Area, Sector of Economic Activity, Size, Intensity, and Form of Participation (1979-1983)

Region	Number of Businesses	Sector of Economic Activity	Number of Businesses	Size (Number of Employees)	Number of Companies	Intensity[1] of Participation	Number of Enterprises	Form of Partici-pation-	Number of Enterprises
Lower St.Lawrence/ Gaspé	26	primary	9	0 to 9	109	33% or -	129	common stock	129
Saguenay/ Lac-St-Jean	29	manufacturing	159	10 to 29	59	34% to 50%	38	profit sharing	27
Quebec	12	construction	1	30 +	24	51% to 100%	48	common stock and profit sharing	59
St.Maurice/ Bois Francs	11	transportation	3						
Eastern Townships	2	trade	8						
Montreal	89	finance	1						
Outaouais	29	services	34						
Abitibi-Témiscamingue	10								
North Shore	7								
Total	215	Total	215	Total	192[2]	Total	215	Total	215

1. The percentage of ownership and/or profits.
2. Includes only the companies that had received at least part of a subsidy as at March 31, 1983; from the Recensement des entreprises participatives carried out as part of the Programme expérimental de création d'emplois communautaires (PECEC) April 1979 to March 1983, 1984, p. 35
Source: Administration - PECEC, March 1985.

Table 3.5
Overall Evaluation of the Impact of Co-Management

Prognosis	Number of Cases			Total
	1st Generation (prior to 1978)	2nd Generation (1978-1982)	3rd Generation (1983 +)	
Positive	5	14	2	21
Nil	2	0	0	2
Negative	2	1	0	3
N/A	1	0	7	8
Total	10	15	9	34

Source: Commission consultative sur le travail (1986).

tion, the structure of ownership and the management structure (see Table 3.6).

3.1.4.2 - Management Trends

Over the years, the objectives pursued by companies with a co-management structure have altered to the point that the very forms of co-management have evolved accordingly. Three dominant periods can be defined.

a) First Generation (Pre-1978): Taking Charge

From the early 70s on, workers have been responding to possible plant closures and taking control of them with little thought to their actual potential for viability. The immediate concern for saving and, in some cases, creating jobs is usually the source of these participative experiments. The ideology of a collective takeover by workers is the basis for such experiences as Tricofil, which is doubtless the prime example.

First generation co-managed companies are mainly found in the remoter areas of Quebec. They are small and operate in traditional economic sectors. Many are unionized. They have experimented with worker participation in the ownership of the company, largely with the encouragement of groups that have become allies in emergency situations. The voting stock owned by investors outside the company has been reduced, except with regard to communal enterprises.

According to an analysis of these 10 co-managed companies, it would appear that, in the early 70s, workers approached ownership individually and on a voluntary basis. Also, a large proportion of the voting stock was held by workers and groups that associated with them for the purposes of this project (management, union, community). These companies have a variety of management structures. Some encourage worker participation on all decision-making levels; others advocate participation of non-management workers represented by union delegates and management staff on the board of directors, and they encourage participation in the actual organization of the work. The workers have direct access to strategic and operational decisions regarding the company.

Only 3 out of 10 co-management experiments begun in the early 1970s finally had to be abandoned, which represents an impressive salvage rate. Each of the companies presented a different style of management. Operating in sectors subject to enormous problems (wood and textiles), these companies have also suffered from internal organization problems.

b) Second Generation (1978-1982): Salvage and Recovery

A second generation of co-managed companies was born in the late 70s and early 80s. This time, more consideration was given to feasibility studies before the participation mechanisms were introduced and before the government would authorize financing. This second generation concerned itself mainly with the recovery and consolidation of companies.

The second generation co-managed companies were located in proximity to urban centers; they were small and principally belonged to the manufacturing sector. With this second generation of co-managed companies, we noticed the advent of a new class of promoters, namely the owners/managers themselves or local business people. Unlike the first generation, the latter were now willing to embark on co-management ventures.

Slightly under half of the second generation co-managed companies were owned by the worker collective. In these companies, the workers and occasionally the middle management staff would form a collective or an association for the purpose of purchasing part of the company's shares. As a group, they then associated themselves with the owners of the company or with private investors who generally controlled the majority of the voting shares. Participation in strategic decisions occurred via this collective. The workers participated directly in the various operational decisions, although they were also subject to a hierarchal form of management.

A third of the co-management experiences begun in the early 80s no longer exist, the economic recession

Table 3.6
Descriptive Aspects of Each of the Generations of Co-Managed Companies

Aspects		1st Generation	2nd Generation	3rd Generation
Overall	**operational**			
Structural Characteristics	Location	Resource areas	Urban areas	Resource and/or urban areas
	Size	Medium 50-199	Medium 50-199	Small 10-99
	Sector of Activity	Manufacturing sector (wood, printing, metal products, garment)	Manufacturing sector (food, textiles, metal products)	Manufacturing sector (Textiles, wood, metal products, chemical products, transportation)
	Union status	Generally unionized	Generally unionized	Rarely unionized
Context for Implementation	Objective	Job preservation or creation	Source of capital, save jobs	Source of capital, save jobs or reorganize the company
	Promoter	Union representatives ard management, union representatives and workers	Union representatives or owners	Owners
	Context	Consolidation, recovery or new entreprise	Consolidation, recovery	Consolidation, new enterprise, expansion

continued...

Table 3.6 (continued)
Descriptive Aspects of Each of the Generations of Co-Managed Companies

Aspects		1st Generation	2nd Generation	3rd Generation
Overall	Operational			
Structure of Ownership	Form of Co-Management	Communal and full	Near parity, majority	Near parity, majority
	Mode of Acquisition	Individual, voluntary	Collective, mandatory	Individual, voluntary
Management Structure	Direct	Strategic and operational decisions	Operational decisions	Little direct decision-making
	Indirect	Strategic decisions (management or union representatives)	Strategic and organizational decisions (union representatives)	Strategic decisions (management, union representatives and non-management workers)
Progress to date	Existence	Several still exist	Most have closed	Still exist
	Structure of Ownership	Fewer shares held by workers	Decrease in number of shares held by workers	Stable
	Management Structure	Return to traditional management model	Return to traditional Management model	Stable

being one of the major causes for this change. These were companies where worker ownership translated into a worker collective. The co-managed companies that still existed in 1985 offered the same methods of participating in ownership and management as they did initially. At most did we observe an increase in the absolute number of workers-shareholders per company.

c) Third Generation: Openness

Since the end of the Recession of 1982, many companies have, in the context of consolidation or innovation projects, implemented a new participative formula. This is the third generation of co-managed companies in Quebec and is not based on alliances formed for the purpose of salvage operations but on a new concept of the nature and organization of business reminiscent of participation in management.

The third generation companies are characterized by one type of co-management especially: near parity co-management. These are generally small companies, located indifferently in either urban or remote areas of Quebec, and concentrated in the manufacturing sector.

The objectives that led these companies to co-management clearly differ from those that motivated the first and second generations. There is a more marked interest in the idea of co-management itself, not only ideologically but in the life experience of the actors as well. The general climate is therefore once again evolving (consolidation rather than closure) with respect to motivation and type of promoters. In addition to focusing on specific short-term economic objectives, co-management is now responding to a need to organize business along more democratic lines.

The management structure of third generation co-managed companies differs little from that of companies that introduced co-management prior to 1983: worker participation in management seems to be limited to worker representation on the board of directors. No decisions are therefore made by the workers directly. In the third generation experiences, the workers own 50% or less of the voting stock in the company. There would therefore appear to be a return to the management style prevailing in traditional companies. The co-management experiments of this generation are still in progress.

3.2 - Participation in Cooperative Businesses

In 1986, there were over 3,300 cooperatives in Quebec, operating in approximately a hundred sectors of activity and totalling over 4,700,000 members. These cooperatives include:

producers, for the most part in the agricultural sector, who are engaged in the marketing and processing of food products;

consumers, belonging to service cooperatives in the savings and loan, residential and food sectors...;

- workers in several sectors of economic activity.

Such enterprises, whether cooperatives of producers, consumers or workers, no matter where they occur, aspire to restore economic activity to a context of service to the individual and the community.

The cooperative is a different kind of enterprise. In the context of worker participation in the company, by its very nature and its objectives, it offers attractive possibilities.

For instance, the status granted members of a workers cooperative is different from the status of workers employed by a corporation, especially with respect to participation in ownership, decision-making and results.

The objective of the workers cooperative is to provide employment for its members. In this enterprise, the traditional "employer-employee" relationship no longer exists. As owners-users, the workers collectively assume ownership of the enterprise and ensure its proper functioning through their participation in the operations and the decision-making. The originality of the formula resides in the fact that the cooperative is a group of workers who are also the owners of the enterprise.

In a workers cooperative, there are no longer any employees in the traditional sense of the word, only co-owners. Part of the profits remain in the company and contribute to its growth, whereas the surplus that can be divided among the workers will be distributed according to the work done by each and not according to their investment.

The workers decide on the major orientations of their cooperative and elect their board of directors, thus ensuring democratic control of their enterprise in accordance with the cooperative rule of "one member-one vote".

The formula affords some interesting possibilities and guarantees. There is increasing interest in the originality and flexibility of the model it proposes and in the many advantages it offers in the area of job creation.

In the United States, some states including Massachusetts, Washington, and New York have adopted legislation concerning workers cooperatives. In Europe, especially in England, France and Italy, where the formula first developed, it contributes to the dynamics of the economy and offers an effective and promising model for development. In the Basque country of Spain, its success has aroused a great deal of interest; the movement has not known a single bankruptcy since its founding in 1957.

The first workers cooperatives appeared in Quebec in the late 30s. Until the Loi sur les coopératives was passed in June 1982, Quebec's legislation contained no special provisions regarding this type of cooperative. The legislator thus filled the gap by acknowledging the special features of the workers cooperative.

For instance, the new Loi sur les coopératives reduces the number of members required to form a workers cooperative to three, allows a company to continue as a cooperative, and confirms the cooperative's power to purchase and hold shares in a corporation on condition that the latter is engaged in an activity that is similar or related to that of the cooperative.

An important innovation is that it enables the cooperative to purchase and hold shares in a corporation on condition that the purchase of these shares entitles its members to work in the business owned by the corporation; an original measure, considering that the cooperative, while acting as sole purveyor of manpower to the company, becomes a shareholder in the company. The dividends paid by the company are divided between the workers in accordance with cooperative rules.

There are over 300 workers cooperatives in Quebec with a total of 10,000 members. Quebec's experience in the area has been positive. The formula has encountered a few problems, but its success rate is significant.

The forestry cooperatives are a prime example. From 10 million dollars in 1976, their business volume increased to 120 million dollars in 1985-1986. As managers of this natural resource, they have created jobs in all regions by increasing and diversifying their activities. Today, they are active in forestry, land development, production and processing.

Other companies operating in diversified sectors merely confirm the opportunities and future prospects that a workers cooperative can offer. Consider, among others: the Imprimerie coopérative Harpell, founded in 1945, a pioneer in the field; a large part of the 12-million dollar business volume it reported in 1986 was earned outside Quebec; Célibec, a company active in the production of computer systems and whose successful performance is rooted in research, innovation and development; Coopérative les Nuages, which represents workers in various sectors of the communications field and which has, in five years, gone from a business volume of $80,000 in 1980-81 to more than $1,000,000; Coopérative Les Cuirs Valois of Acton Vale, a company in full expansion, was nominated for a "Mercure" for the quality of life at work in 1987; the Coopérative de travail Doniplast, which specializes in fiberglass and plastic moulding, has grown quickly and now markets its products in a number of U.S. states; the Agence coopérative d'auxiliaires familiales de Montréal (Auxi-Plus), which offers a full range of home maintenance services and has over a hundred workers; the Unisaco workers cooperatives (factory workers) and Cofor (forestry workers) which, jointly with the Investra Corporation, founded Boisaco Inc. which operates a sawmill at Sacré-Coeur in the Saguenay/Lac-Saint-Jean area; the enterprise has saved more than 350 local jobs and this year earned the Alphonse-Desjardins Award for innovative activity; the Coopérative de travailleurs du

Royaume which, together with seven other forestry cooperatives, is participating jointly with such enterprises as Normick Perron, the Syndicat des producteurs de bois du Saguenay/Lac-Saint-Jean and the Fédération des coopératives forestières du Saguenay/Lac-Saint-Jean, in the start-up of a presswood panelling plant, which is scheduled to open in the summer of 1988 at Chambord, in the Saguenay-Lac-Saint-Jean area, a $64-million-dollar project.

These few examples are revealing. The specific nature of the formula and the innovations it has brought, principally with respect to worker integration and participation in companies, make it a prime vehicle for economic development. The mode of organization proposed by the workers cooperative, in Quebec as elsewhere, is constantly evolving and offers some interesting propects for the future.

It would seem that workers groups that aspire to own their own company in order to preserve or create jobs are gradually becoming a component of society and the economy. Not only are they capable of meeting certain needs in the area of quality of working life and job creation, they have also shown themselves to be a means of both involving workers in business expansion and increasing productivity.

Chapter 4

Small and Medium-Sized Business and the Transfer of Technology

The purpose of this chapter is to provide information on the principal aspects of **the transfer of technology**. It is meant as both a practical and conceptual guide, to help small and medium-sized businesses (SMB) identify the different stages of transfer and the various sources of information available in order to improve the transfer of technology, for the benefit of the company, the researchers and the groups and individuals who transmit and adapt this perpetually changing knowledge. The information contained in this chapter is mainly intended to make the reader aware of the strategic importance of technological transfer both to small and medium-sized business (SMB) and to Quebec.

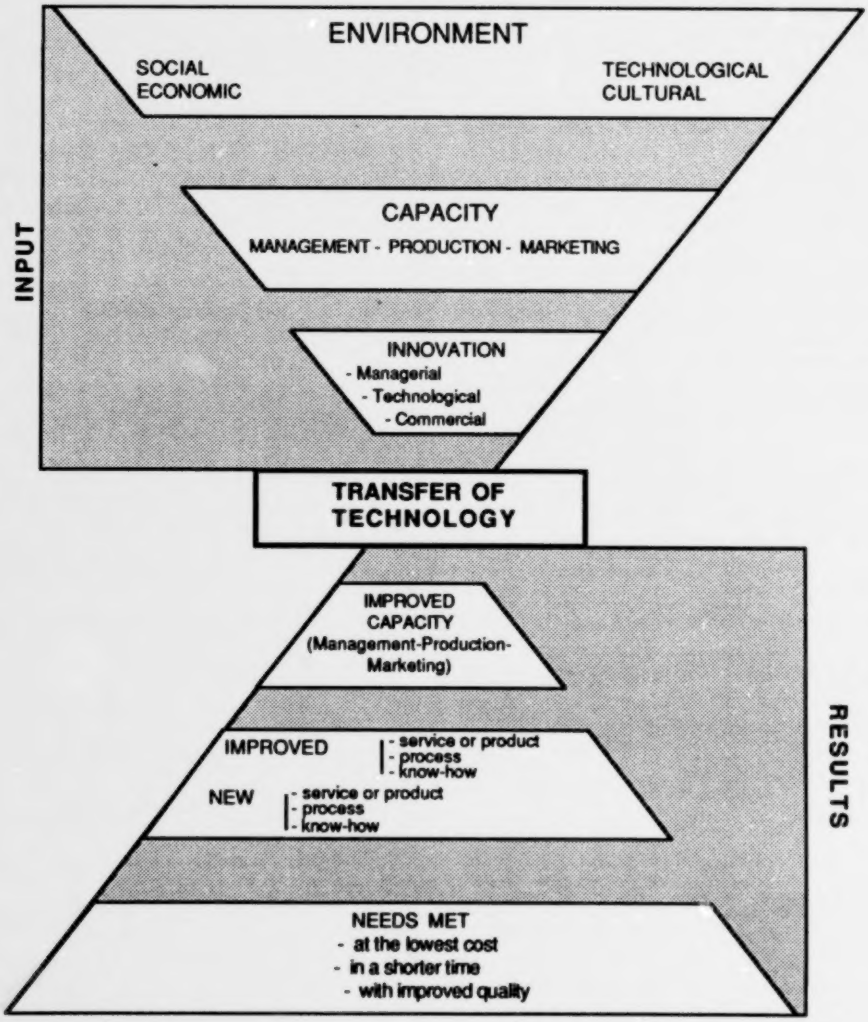
We live in a time when accelerated technical progress is constantly changing our lifestyle – both individually and collectively. To such an extent that the very existence of business is increasingly tied in with this acceleration, especially in an economic context in which national and international competition is very fierce, thus forcing entrepreneurs to keep pace and to adapt quickly to new discoveries. Fortunately, **technological progress is accessible to SMB** in spite of their often limited financial means and personnel. They can therefore meet the challenge either by acquiring the knowledge or know-how or by selling their own discoveries to interested companies – after ensuring their ownership of the technology is adequately protected.

We are going to see that the transfer of technology is not reserved exclusively for big business: small and medium-sized business (SMB) can develop easy access to the innovations and knowledge generated by organizations, researchers, and professional or home inventors. We will also examine the various types of transactions (patents, manufacturing under license, sub-contracting, etc.), as well as the kinds of precautions that are required and the impact of transfers on SMB.

The transfer of technology is part of a general process that is based on the concept of innovation, and which deals with managerial, technological and commercial aspects as well. These aspects, practically speaking, depend on the management, production and marketing abilities of the company and, in an even broader context, on the social, economic, technological and cultural environment.

Table 4.1 illustrates the juncture represented by the **transfer of technology** with respect to the company's capacities (management-production-marketing) and the development of these capacities from both a quantitative and qualitative standpoint. The

Table 4.1 - The Status of Technological Transfer in a General Context


ENVIRONMENT
SOCIAL
ECONOMIC
TECHNOLOGICAL
CULTURAL
INPUT
CAPACITY
MANAGEMENT - PRODUCTION - MARKETING
INNOVATION
- Managerial
- Technological
- Commercial
TRANSFER OF TECHNOLOGY
IMPROVED CAPACITY (Management-Production-Marketing)
RESULTS
IMPROVED
- service or product
- process
- know-how
NEW
- service or product
- process
- know-how
NEEDS MET
- at the lowest cost
- in a shorter time
- with improved quality

aim is to improve or create a product, service, or process, as well as the staff's "know-how".

In short, the **transfer of technology** is a means of satisfying the customer's needs at the lowest possible price, within the shortest time, and by means of a higher quality product. It is therefore a key element in the survival of the company and a good way of dealing with the competition.

4.1 - The Transfer of Technology

4.1.2 - Words Shrouded in Mystery?

There is a great deal of talk about biotechnology, data processing, robotics, CAD (Computer-Assisted Design) and CAM (Computer-Assisted Manufacturing)... For some, all this resembles a kind of esoteric science that is practiced in dark laboratories by slightly weird scientists. Still others assert that the innovations generated by the different types of research are readily available and can be transferred to small and medium-sized companies. In fact, we are going to see that there is nothing at all mysterious about the "transfer of technology".

The term **technology** implies everything that makes up a company: the machines, the tools, the materials... It also includes the patents, trademarks, industrial designs, copyrights, licenses, franchises, etc. Viewed overall, these elements form what is known as the "industrial property". Add the know-how of the entrepreneur and his employees to all this. These elements are all part of a company's assets.

Some of these elements cannot be dissociated from the company's activities: they distinguish the company from its competitors (a "secret recipe", for example). Other technologies, on the other hand, can be made available to other interested companies: this is what is called **"selling"** your technology. In order to develop or diversify, many companies have to acquire or **"buy"** technology. And buying and selling technology presupposes the whole concept of **transfer.**

4.1.3 - A Definition

In a broader sense, the transfer of technology is anything that involves transmitting know-how or knowledge (whether patented or not) for a utilitarian purpose. It may have an **application**: this occurs between one level of knowledge (a research centre, for example) and another (a small or medium-sized company...). At this stage, the transfer is a result of basic research (for the advancement of knowledge in a given scientific field), of applied research (results of basic research applied to immediate utilitarian purposes), of R&D, engineering, or the craft industries. This is a vertical transfer.

Adapting one field of application to another is called horizontal transfer. For instance, the process used in coffee-vending machines can be adapted to dispense soup from concentrate.

Table 4.2 - Definition of Transfer of Technology

THE TRANSFER OF TECHNOLOGY

IS

THE TRANSMISSION - THE PASSING
(PURCHASE OR SALE)

of
- **knowledge**
- **know-how**
- **techniques**
- **processes**
- **formulas**

(whether patented or not)

ACCORDING TO METHODS...

- ■ - of APPLICATION (vertical transfer)
- ■ - of ADAPTATION (horizontal transfer)

in order to

introduce an innovation or an invention

The **use** of information, whether or not combined with R&D or engineering, is what is known as "technological and industrial information". Finally, there is the **transmission** (contractual or not) of the knowledge or know-how. This can be between individuals, from an individual to an organization or vice versa, or from one country to another. The appropriate terms in this case are "manufacturing under license" and "industrial agreements".

The transfer of technology is a quick way for a company to introduce technological innovation.

4.1.4 - "Push" and "Pull" Transfers

A **push** transfer is a technological idea that is developed and designed in universities and research centres, and then sold directly to business. This means "pushing" the results of a variety of university research projects. The drawback is that the subjects dealt with in university and other laboratories are often far removed from the market and from the actual needs of business... This form of technological transfer was very popular in the 60's and 70's.

Because **push** transfer had the disadvantage of not being entirely usable, research organizations gradually shifted to **pull** transfers. This international trend originated mainly in the United States, and is becoming increasingly common. In fact, companies are now approaching the laboratories with their ideas and needs! And the research centres handle the technical side by applying their basic knowledge to market needs.

4.1.5 - Types of Transfer

Just as a small and medium-sized business (SMB) markets its products and services, technology is marketed by means of sales, purchasing and leasing contracts. The vocabulary of these contracts illustrates the legal content of the transactions: licensing agreement, franchise contract, contracts for the assignment (or sale) of a patent, the sale of know-how, of technical assistance, and "turn-key" contracts for plants and products. We will be covering specific types of transfers (patents, manufacturing under license and sub-contracting) in greater detail in upcoming chapters.

Any company, regardless of its size, uses certain forms of technology — for example knowledge, processes and equipment. But this technology changes along with the demands of the market and scientific discoveries. Researchers and inventors around the world are daily engaged in pushing back the outer limits of the impossible. The purpose of mechanisms for the transfer of technology in Quebec is to make the results of this research accessible to all businesses.

While the transfer of technology is partly a function of the general environment of the company — its needs, its means and its context — it is also a function of the information available and the proximity of research centres and of organizations that can adapt these discoveries to various applications and uses. It is therefore important to know where to look for information and to be familiar with the mechanisms of transfer. We will therefore examine the sources of information and the ways in which they can help SMB access technology.

4.1.6 - Organizing Information Needs

Information is the raw material of innovation. Companies spend varying amounts of time and money participating in the occasional trade show or industrial exhibition, attending seminars or study sessions, talking to customers and suppliers. This is the traditional way of gathering information... and the result is often bits and pieces of information which then have to be assembled like a jigsaw puzzle!

The problem is that the entrepreneur discovers, often too late, that he should have had more information before making the decision or taking action. In an industrial context, information should be processed according to new habits, which include...

- Planning your information gathering according to the commercial risk:
  - Is the aim of the information to find a solution to an immediate **problem**?
  - Or is it to build a portfolio of **strategic** information in order to increase the stock of knowledge needed to develop the company?
- Defining areas of interest and pinpointing the company's needs.
- Selecting the means of information most suited to the context.

By looking at information in this way, we are increasing its elements of quality, making it an integral part of a valuable strategic capital. Furthermore, the abundance of available information is a little frightening: dozens of millions of economic, technical, and socio-economic references are to be found in close to 2,500 databases! And then there is the information that has not yet been published, not to mention the advice of experts.

4.1.6.1 - Inside and Outside the Company

Inside...

If you are the owner/manager of a company, you probably have access to some of the information you need to transfer technology but you have never thought of analyzing it. So why not look to your own resources first, your own activities, your own processes? Listen to yourself, to your company... Often important, even vital information is within easy reach.

Your staff is an important source of information. The employees closest to your production operations are a good place to begin the transfer process, as long as the organizational climate is favorable to the company's input. Careful inspection of your facilities and listening to your employees can provide the necessary foundation for converting from one technology to another. Your suppliers are also an ideal source of information. Similarly, you should not stop at evaluating the quality of the product they are offering; in fact, the quality of the suppliers themselves should be taken into account, as well as their services and the interest they take in your product and your means of production; the interest may be reciprocal if your sales impact theirs.

Your customers are also very important: they are occasionally your best consultants for improving or producing a new product or new service. They often have specific needs and special demands and, since they do not have to worry about managing a company, their viewpoint is not limited by daily realities... It may well be that your customers will suggest new and innovative ideas. So, be sure to listen to these sources of information.

Outside...

The Centre de recherche industrielle du Québec (CRIQ) offers industrialists access to its "Industrie Information" department. It is a powerful, rapid and flexible information tool, with more than 15 years' experience in research, analysis and synthesis in the field of technology. In fact, anyone interested can very quickly access over 1,000 directories and listings, 600 databases in North America, Europe and Asia, over 650 market studies and sector surveys. Not to mention a network of privileged contacts. "Industrie Information" is presented as a discreet, personalized service where specialists provide answers to concerned individuals in the form of verbal communication, short summaries a few pages long or, again, appropriate studies. The information is therefore "made to measure". For more information, contact "Industrie Information". (See Appendix 6.)

On the technological side, these specialists evaluate the trends, advantages, impact and drawbacks of various technologies. They discuss the relevant patents, standards, homologation procedures and miscellaneous regulations that can affect the products destined for local or international markets. They can even, given a plan that focuses more on marketing, compile statistics and study the scope and tendencies of the markets, their structure and their development, or outline elements of a more commercial nature, such as prices, competition and distribution.

This gold mine of personalized information enables the entrepreneur to keep track of technological advances in his field or in related fields; it allows him to enhance his knowledge of the market and of its progress in the short and medium term; it allows him to explore new markets; and finally, it affords him speedy access to the people who can solve any unforeseen

Table 4.3

Government Assistance Preferred by Owners/Managers of Small and Medium-Sized Businesses (SMB)

Participation in a trade mission, all expenses paid	61%
Market survey	58%
Government contribution for trade shows	36.5%
Introductions to the Maisons du Québec (Quebec House) or Canadian embassies	30%
Financing for implementation projects	28%

Note: Percentage represents the rate of favourable responses.

problems. It can also put the company in touch with the organizations responsible for assistance programs.

4.1.6.2 - The Information Broker

The abundance of technological information occasionally makes it necessary to use a broker, an information specialist. The latter is a master of all types of information, whether technological or industrial, that may be useful in business; his background is such that he understands the problems of the industry, and can therefore test and analyze the information, and then compile the processed information into a form that is immediately usable and productive – for the information generated by the databases rarely responds directly to a company's needs. A broker can therefore be extremely valuable in building a portfolio of strategic information.

4.1.6.3 - Industrial Fairs, Exhibitions and Trade Missions

Montreal, Quebec, Paris, London, Chicago, Atlanta, Milan... These cities are all rendez-vous points for thousands of industrialists interested in innovation. These and many others are the site of international fairs and exhibitions where participants can introduce or discover new products and new techniques. Whether as a visitor or an exhibitor, the entrepreneur has access here to an original tool for technological transfer, one that will ensure his company's growth, that will help satisfy his most pressing needs for innovation.

"At these fairs, entrepreneurs often encounter a new product that corresponds to an idea they have had in mind for some time. It might therefore be interesting to find out how the product is made, to talk about the product features with the exhibitor, about market prospects or the possiblility of manufacturing under license"[1].

In a recent study on small and medium-sized manufacturing businesses in Quebec[2], owners/managers reported in 61% of cases (see Table 4.3) that their business would benefit from financial assistance for their potential participation in trade missions; also, according to 36.5% of the respondents, financial contributions enabling them to participate in international shows represented the kind of support they were looking for from government organizations in the area of international trade. Indeed, the governments already heavily support companies wishing to participate in such missions (assistance with human, material or financial resources). This assistance, in practical terms, includes making the initial contact with foreign organizers, the design and development of exhibition booths, advertising, travel arrangements, coordination of activities during the trip, etc. What is surprising about these results is the preference that owners/managers of SMB have shown for trade missions and exhibitions, compared to the financing of introductory projects (28%).
In Quebec, in recent years, trade and industrial shows have become increasingly numerous and varied. Many of these events are in fact of international caliber and are moreover very well structured. The annual international Salon "Le monde des affaires" is an eloquent example of this. What advantages can the exhibitor derive from these events? A study conducted by the Trade Show Bureau estimates that 83% of the influential people met at these shows would never have been met otherwise or elsewhere! The study furthermore evaluates the cost of meeting a potential customer at an exhibition at $57 – whereas it costs $137 to visit a client directly. There is therefore evidence that the trade show is an attractive opportunity to make contact with people that would be difficult to meet or reach otherwise. With regard to the transfer of technology in particular, trade shows can help the entrepreneur come up with new ideas for new products or new applications, provided he knows how to listen to the comments and inquiries of visitors.

For more information about trade shows, exhibitions and trade missions, please contact the Direction régionale de l'expansion des marchés at the Ministère du Commerce extérieur et du Développement technologique du Québec, or the export development programs sponsored by the Department of External Affairs. (See address in Appendix 6.)

---

[1] Le Novateur, CRIQ, vol. 1, n° 3, 1984, p. 6.

[2] Relations d'affaires des PME avec l'étranger, study conducted by Ghislain Théberge and Julien Naud, June 1987.

4.1.7 - Purchasing Technology

Purchasing technology, when possible, purports the following advantages: it involves fewer risks, costs less than development does and is often profitable in the short term. However, when purchasing technology is the only option that is utilized, the company runs the risk of becoming technologically dependent in the medium term, which may affect its growth.

A company that purchases technology should evaluate a number of points first before concluding a licensing agreement. Is the issue one of product improvement or the acquisition of a revolutionary process? Are there other possible approaches? If the evaluation proves conclusive, the technology must be safeguarded with an evaluation of the strength of the patents and their protection (can know-how be kept secret, or can the product be controlled?). These evaluations will all be necessary when the time comes to negotiate the transfer of a technology, determine the royalties, etc.

There are therefore two options available to the SMB that are forced to adapt quickly to their environment in order to ensure their growth: the purchase of technology, and development (whether entrusted to a third party or done internally, within the company).

Purchasing Technology	**Development**
Advantages:	**Advantages:**
– involves fewer risks	– compatibility of research and needs
– costs less	– acquisition of technological independence
– is profitable in the short term	– possibility of selling acquired technology
Disadvantages:	**Disadvantages:**
– technological dependence	– is riskier
– technology quickly obsolete	– costs more
	– takes longer

In either case, small and medium-sized businesses (SMB) can associate themselves with a third party (private or public organization) that will provide the technical support throughout the process.

4.1.8 - Partners in the Transfer of Technology

Some Quebec organizations have a mandate to bridge the gap between the research laboratories and the production shops in companies. These "knowledge-shops" are clearly identified: the universities, the research centres and private or home inventors. Transfers are always possible... but are they desirable?

In the case of university transfers, the company makes the contact, provides the subject... and the university supplies the basic research in the guise of master's and doctoral theses. The work is done in cooperation with large companies or SMB, which remain the project promoters throughout the process. It is, in a manner of speaking, a way of keeping R&D costs down for their companies (assistance and subsidy programs for instance). Hundreds of university researchers – some of whom are internationally known – are just waiting for ideas from entrepreneurs. Therefore, why not use this immense potential? The social context is favorable; the universities are looking to increase their involvement in the community; changes in attitude are revealing more openness; the economic reality is forcing companies to innovate; and there is a need for communication and information. In short, why not take advantage of the mechanisms that link businesses and the universities, and use this capacity and this expertise to meet the challenge of the import markets, the competition, and even free trade.

Nowadays, university organizations such as the Bureau de valorisation des applications de la recherche (BVAR), at Laval University (Québec), University of Montreal, McGill University, Concordia University, and University of Sherbrooke, or within the Université du Québec network, facilitate the transfer of research results from university laboratories to the companies of Quebec. They make what is done by researchers and graduate students available, they make information accessible to entrepreneurs (advisory work), and form the link between the research results or the theses and the companies.

There is also the Centre d'innovation industrielle de Montréal (CIIM), the Agence québécoise de valorisation industrielle de la recherche (AQVIR) and the Canadian National Research Council (CNRC has assistance programs for industrial research)[3].

Still based on the "pull" approach, the CRIQ is a dynamic partner for business: It helps companies meet the demands of the market and the competition by supplying technological and industrial information; by finding solutions to production problems; and by assisting with the development and improvement of products and manufacturing processes. In fact, the CRIQ has a mandate to promote the economic growth of Quebec by supporting and stimulating the technological development of Quebec industry. This industrial research centre maintains offices in Montreal and Quebec City and treats as confidential all mandates for development or improvement of equipment and processes, technical testing, applications for patents, etc.

---

[3] See Appendix 6.

From a practical standpoint, the CRIQ can also help business with...

- productivity improvements;
- cost control;
- transfers of technology;
- computer-assisted design (CAD);
- computer-assisted manufacturing (CAM);
- automation;
- biotechnology;
- composite materials;
- artificial vision;
- etc.

The Ministère de l'Industrie et du Commerce du Québec, through its regional branches, is also available to guide manufacturing firms planning to get into technological development. Often, a diagnosis of the company is a prerequisite when it comes to technological development; it may also be appropriate to draw up a development plan and implement certain strategies in order to make the connection between the customer's needs and the imperatives of production. In the course of this analysis, economic development consultants coach the owners/managers of SMBs to draw up plans of action that may eventually lead to a transfer of technology and to innovation. These resource persons can be contacted through the regional branches of the Ministère. (A list of these branches with their addresses appears in Appendix 6.)

4.2. - Steps Involved in the Transfer of Technology

As we have just shown, technological transfer is just one step in the larger process of innovation[4]. In fact, the process begins with a search for **information** about the products and their technical aspects, or the identification of a specific market need in the context of a range of technological possibilities. Between 65% and 75% of all successful innovations, according to studies conducted in the U.S., owe their success to such basic information. **Technological transfer** is a logical outcome of this first step: the company then turns to the

---

[4] GASSE, Yvon, L'Innovation et les transferts de technologie, Document spécial 83-110, Faculté des sciences de l'administration, Université Laval.

Table 4.4

Sources of Information on the Transfer of Technology

- Yourself
- Your management team
- Your employees
- Your current production method
- Your current equipment and machinery
- Your suppliers
- Your customers

- Trade shows
- Industrial exhibitions
- Trade missions
- Industrial tours

- Business magazines
- Scientific magazines
- Industrial databases
- Lists of manufacturers

- Patents
- Industrial agreements

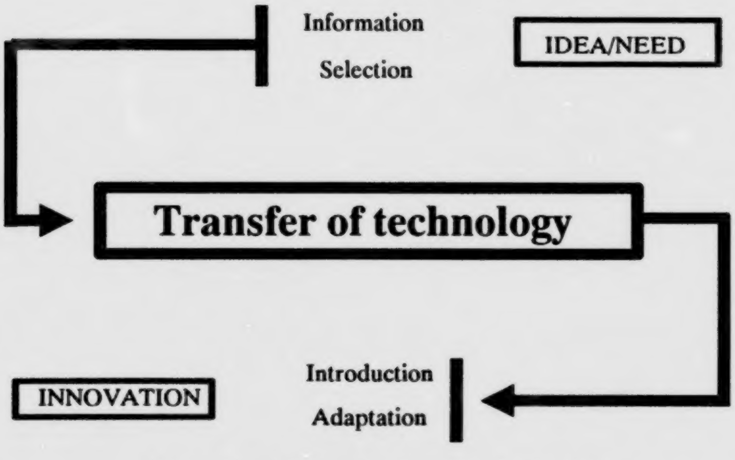
available technologies or engages in technological research of its own.

The technology is subsequently integrated into the company's activities; this is the **introduction** stage. A certain amount of adaptation is then required in order to adjust the technology to the peculiarities of the company – such as its size, its human and financial resources, technical compatibility with the equipment it already has, its organizational structure, etc. Finally, a **break-in** period is essential for optimum implementation of the technology.

Thus, technological transfer, from the initial idea or need to the final innovation, must be considered as a vast process that follows the logic illustrated in Table 4.5.

In this process, **information** as indicated above is the key element that precedes the **transfer of technology**. Companies should bear in mind that technological and industrial information is an essential component of their survival. They must be on the leading edge of progress, explore national and international markets... and use the available means of information. In fact, the majority of manufacturing firms already know that their products, their manufacturing processes and their markets are going to have to change over the next five years. This means that they should already be planning to replace their declining products, to introduce new manufacturing processes - or refine existing ones. Moreover, there is the competition and the demands of the market to consider.

Table 4.5
Steps to Innovation



One has to be ready to react at the right time.

The transfer of technology cannot be implemented in an isolated manner. We have just seen how this process is part of a whole; and the owners/managers of SMB should not consider a transfer, even a minor one, without taking the larger view of their company and their community. We therefore recommend that they approach the transfer of technology in the context of four major steps:

Step 1: Analysis and compilation of information;
Step 2: Preparing for the transfer of technology;
Step 3: Implementation or start-up;
Step 4: Evaluation of results.

These steps will be successful if the owners/managers of SMBs extend their analysis not only to the transfer as such, but also to the two other components of innovation, namely the managerial and commercial aspects.

Table 4.6 proposes a general approach to the transfer of technology in small and medium-sized businesses (SMB). The advantage of this table is that it organizes these steps into a chronology of events, illustrates the integration of the managerial, commercial and technological aspects, and allows the owner/manager of the business to focus his attention on the element(s) that seem(s) the most important - and still keep the concept in perspective.

4.3 - Technological Evaluation of Small and Medium-Sized Business in Quebec

4.3.1 - R&D Ensures the Vitality of Companies

In Quebec, in a limited domestic market, small and medium-sized businesses (SMB) must often export part of their products – and therefore confront some very sharp competition on the international markets. A study[5] performed in June 1987 reveals that 65% of all small and medium-sized manufacturing firms in Quebec export (69% of these export to other Canadian provinces, 84% to the U.S. and 49% to Europe).

In addition to being subject to international influence, the current market environment can be described as follows: a company that wants to expand must keep at least a length ahead of the rest! In fact, modern business cannot rely on past successes: a new technology or new process will not remain its exclusive property indefinitely. Anyone can use this knowledge the moment it is released. What is innovative and revolutionary today will be commonplace tomorrow...

---

[5] Relations d'affaires des PME avec l'étranger, study conducted by Ghislain Théberge and Julien Naud, June 1987.

Table 4.6 - Stages in the Transfer of Technology

Stages one: Analysis and Compilation of Information

Managerial Level

- management attitudes
- manpower qualifications
- leeway (laws, regulations, decrees, collective agreements...)

Commercial Level

- market surveys

TECHNOLOGICAL LEVEL

- **research into the status of technology in the sector**
- **research into sector standards**
- **researching patents**
- **a technical feasibility study**
- **a profitability and productivity study**
- **research on industrial agreements**

Stage two: Preparing for Technological Transfer

Managerial Level

- strategic plan for managing change
- personnel training plan
- financing plan

Commercial Level

- strategic for market penetration
- customer marketing plan

TECHNOLOGICAL LEVEL

- **development of product or process**
  - *concept*
  - *design*
  - *prototype*
  - *tests*
  - *patent*
- **industrial agreement**
  - *manufacturing under license*
  - *purchase or sale or know-how*

Stage Three: Start-Up of Production

☐ **Managerial Level**

- implementation of various plans (managing for change, training, financing)
- adjustment of plans and implementation of processes to facilitate integration

☐ **Commercial Level**

- implementation of marketing plan, adjustment according to client and start-up of production

☐ **TECHNOLOGICAL LEVEL**

- **purchase of machinery and equipment**
- **physical adjustment (enlargement, physical modifications of production lines, layout of shop, etc.)**
- **integration of new product/service or their improvement with quality control**

Stage Four: Evaluation of Results

☐ **Managerial Level**

- impact on management and on staff

☐ **Commercial Level**

- impact on market and on competitors

☐ **TECHNOLOGICAL LEVEL**

- **impact on production of product/service and on possible improvements**

On the other hand, the advantages of innovation reside in the products and services themselves: each product is identified with the manufacturer, which in a way affirms the latter's right of ownership; legal protection (patent or copyright) is available; and the competitor must often invest a great deal of time and money to copy the product or adapt the service. Unfortunately, while the cost to the copycats is high, it is even higher to the innovators! R&D is an activity that involves considerable costs. Does small and medium-sized business have the means (financial and human)? The challenge is precisely to increase their innovative capacity.

SMBs in Quebec are not only forced to participate on external markets (our domestic market being limited) and to keep pace with the rapid growth of local new technologies, they also have to deal with a massive wave of high-tech products imported from outside! For instance, in 1985, high-tech Canadian imports exceeded similar exports by 14 billion dollars. The difference, according to observable trends, is increasing by 15% per year. There is also a high percentage of imports in sectors where the transfer of technology and innovation are already present: We import 80% of our machine tools, hospital and medical equipment, and scientific equipment; and 95% of our high-tech mining equipment.

If we consider the efforts made by Canadians as a whole, what emerges is that only 1.2% of the gross national product (GNP) is allocated to R&D – which leaves Canada in seventh place among industrialized nations. R&D efforts in Quebec's industries are equivalent to only about one third of the R&D in U.S. industries.

Moreover, there is an interesting movement in Quebec, stemming mainly from SMB, towards a more sustained effort at R&D and technological transfer. For instance, the strongest R&D sectors in Quebec are electronics, chemical products, aircraft equipment, pulp and paper, and primary metals. Generally, the high-density R&D industries are those that have exhibited clearly superior effectiveness.

A recent study conducted by the Canadian Economic Council[6] clearly demonstrates that the growth rates for both business and employment are significantly higher in innovative companies. The study surveyed 1,000 companies and analyzed the impact of technological transfer on their performance. The researchers noted that the level of employment increased by 12% in innovative companies, whereas it often decreased in the non-innovative companies; the study also reports a higher productivity, as well as 40% salary increases over five years, compared to 32% in other companies. Two thirds of the technological changes concerned office automation systems, whereas the last third pertained mainly to automated techniques and production processes.

---

[6] Study carried out by the Economic Council of Canada, Working with Technology – A Survey of Automation in Canada, by Gordon Betcherman and Kathryn McMullen, 1986.

A study conducted by the CRIQ shows that innovation and R&D are more a function of entrepreneurs rather than industrial sectors: small companies exhibited a higher performance than companies with over 250 employees, controlled by Quebecers; and the latter carry out three times less R&D than companies controlled by Canadian or foreign interests.

Research into the financing of SMB in Quebec[7] reveals that close to 11% of the sums collected from a first public issue are allocated for R&D. In fact, a quarter of the small and medium-sized manufacturing firms in Quebec report that investment in R&D is one of the main reasons why they opt for public financing; and 41% of them use R&D to invest in the purchase or improvement of equipment.

Of course, the R&D option costs more, takes more time and involves more risks. On the other hand, it ensures that products and services are more compatible with company needs, it allows for a certain technological independence (in the longer run)... and possibly even the sale of the technology — as well as a better return on investment when the product or service is a success. It should be noted that an average of three and a half years generally elapse between discovery of the existence of a new technology and its acquisition; add another seven months for installation of equipment and an average of six months for the break-in period...

Small and medium-sized businesses (SMB) that decide to get into R&D on their own often have to neglect their other daily activities in order to devote themselves to it fully. They also have to set up an infrastructure for research, which they cannot always afford. One solution is to **deal with a third party**. This way, the company will not have to outfit itself with specialized staff and equipment; and it will have access to experts in various fields, and to modern well-equipped laboratories.

In future, it looks like the most effective and least costly combination for SMB will be to hire technical personnel that can **manage** the R&D project and **cooperate** with the third party. This is how the basis for an R&D team will gradually develop, out of a concern for greater autonomy. SMB will not be isolated at the technical level if they know, from the outset, how to use the services of competent experts and organizations.

A U.S. study shows that its costs proportionally less to innovate in small businesses than it does in big busi-

---

[7] La PME et le financement public au Québec: Attrait – Décision – Impact, Jocelyn Desroches, Ahmed Naciri, Ghislain Théberge and Julien Naud, July 1987.

Table 4.7
Intensity of R&D According to Company Size and Controlling Interest

Size of company	Controlling Interest			
	Quebec	Canadian	Foreign	Total
0-49	11,5	5,8	6,4	10,1
50-99	2,6	5,9	5,0	3,5
100-249	3,1	6,0	3,1	3,5
250-499	0,9	3,4	2,6	2,2
500-999	0,6	5,3	2,7	2,7
1 000 or more	0,9	0,6	2,1	1,1
Total	1,5	1,8	2,5	1,9

Note: The intensity of R&D is defined as the number of research professionals employed.

1. Table drawn from Comment la PME peut survivre aux années 80, by Y.G. Perreault et al., Ed. Programme formation de l'homme d'affaires, 1982, p. 147.

nesses. This observation also applies in Quebec. For instance, it costs $20 to reach a certain level "x" of innovation in big business, while the cost is $4 in a medium-sized business and 1$ in a small business! There is therefore a viable opening for a small or medium-sized business to become a supplier of technology... to big business!

We know that a limited number of SMBs (approximately 400) regularly or intermittently devote some effort to R&D. However, fewer than 7% of the owners of SMB have purchased foreign technologies under license. Most rely, instead, on the 500-odd scientists in the various public or university research centres to carry out their development or improvement projects. Approximately 500 entrepreneurs use the services of these scientists every year in order to supplement their own teams of engineers. And this number can run to over 3,000 in Quebec, depending on the type of business[8].

When we asked the owners/managers of SMBs why they do not engage in R&D, the most frequent answers were the following[9]:

- "It's a field for universities and big business";
- "Our product already sells well! The client would be unwilling to pay what it would cost to improve it";
- "I don't have the staff for it; it would cost too much";
- "I don't know anything about it; I prefer to put my money into stimulating sales: it's more profitable!";
- "Dealing with researchers would be complicated; I bet it isn't any picnic".

What is interesting is that after they had expressed their initial reaction, the respondents then tended to alter their point of view considerably when asked to compare their current manufacturing process or products to those they had five years ago. They saw for themselves that, in many cases, they have already altered their processes or products significantly! What is more, they often used non-scientific personnel to make major improvements to their production chain and this has been very successful. These facts clearly illustrate why one must be cautious about associating "innovation", "transfer of technology", "R&D", "engineering" and "researcher"...

4.3.2 - The Transfer of Technology: The Link Between Small and Medium-Sized Business and Big Business

While it costs less to be an innovator in SMBs, the fact remains that marketing, large-scale applications and the use of new technologies are more often observed in big business. The latter are generally well equipped in terms of human and material resources, and research laboratories. These multinationals are often in contact with a number of sectors, numerous suppliers and different cultures. In Quebec, approximately 75 large companies have their own team of researchers and technicians devoted to R&D. They employ close to 4,500 professionals and technicians in various disciplines in order to meet their own innovation needs.

---

[8] Innovation – développement technologique, Jacques Plourde, CRIQ, SMB management course, November 19, 1986, Université Laval.

[9] Telephone survey of 20 owners/managers of small and medium-sized manufacturing businesses in Quebec, Ghislain Théberge, Université Laval.

The new technologies emerging from these large organizations (both private and public) can be transferred to SMB by means of a close interrelationship between these two sectors. A few of the most viable and profitable means: become a supplier or subcontract from big business. This is one way SMBs can acquire know-how or an advanced production process.

What are the secrets of the Japanese manufacturers who have invaded our markets with cheaper and often better quality products? The concept involved is, in fact, that of a finely woven network of sub-contracting between SMB and big business. The network is supported by two major factors: the elimination of waste and respect for human beings. First of all, waste is reduced by means of **quality control at source** and by maximization of the production chain. Next, the success factors inherent in the concept of "human respect" are permanent employment of full-time personnel, worker participation in decision-making and in circles of quality, automation and robotics... Sub-contracting therefore plays a major role in terms of the economic and industrial growth of Japan: 90% of businesses, most of which have fewer then 30 employees, are part of an immense network of suppliers.

In Quebec, the concept of sub-contracting is evolving at a rapid pace. While it is true that the cultural and legal context is different from that of Japan, an increasing number of large companies are forming production networks with SMBs, based on the concept of "just in time". Meaning that more than one SMB may be commissioned to manufacture the components of a product according to very precise specifications of quality. The small and medium-sized companies must then deliver their components "just in time" so that the assembly line can incorporate them into the manufactured product – without rejects and without inventory.

Specifications for quality, safety standards, delivery schedules, etc. are therefore of great importance; and large companies are willing to help transfer the technology to small and medium-sized businesses (SMB), because they are aware that this can have a real impact on their effectiveness and profitability. The concept of sub-contracting is becoming increasingly important in Quebec, especially in the transportation equipment, aerospace and telecommunications industries. In certain sectors of Quebec's economy, there are decrees that prohibit or limit sub-contracting (for example, the retail fur industry decree, Sections 3.04 and 12.01, June 1, 1983; and the handbag industry decree, Section 12.02). This situation reflects our collective attitude towards this manner of organizing work and shows how technological changes are not merely a matter of technology, but of culture, world vision and management as well.

4.4 - The Impact of the Transfer of Technology on Human Resources

4.4.1 - A Question of Attitudes

When we look at the overall concept of the transfer of technology, we realize that the latter is not merely connected to the field of knowledge, technology and science: it is more a question of **attitudes**. Attitudes regarding the growth of the market, attitudes regarding customer needs, attitudes regarding automation, robotics, information, etc.

When we talk about attitudes, we are necessarily talking about people. This is why the transfer of technology, or non-transfer, has a major impact on human resources. In fact, this impact will be as significant for the executive management of the company, as it is for the middle management and production employees.

Owners/managers of SMBs all differ according to their attitudes toward technological growth, their style of management, how they use their time, and their relationships with employees, customers and suppliers. For instance, in terms of management style, owners/managers of SMBs who are looking for major innovations will have to shift to an increasingly decentralized mode of management. In fact, the amount of leeway granted foremen or employees will be indicative of success; not only in terms of implementing a transfer of technology, but also in terms of their own specific innovative creativity. Similarly, the "communication" function will also have to take on more importance. In order to innovate, as we have already seen, one has to know what is going on elsewhere, be able to manage a whole mass of information, to communicate with one's associates... and ensure that the information circulates freely between the various departments, as well as establish structured information mechanisms between suppliers, customers and, occasionally, even competitors.

4.4.2 - Employee Participation

As far as production employees are concerned, technological changes affect not only the scheduling of their working time, their health and safety, their on-the-job training and motivation, it also affects the very nature of future jobs. This is why all technological changes must be introduced with the help of the employees: for they are the most affected. Such changes tie in closely with notions of **mobility, promotion, seniority, training, retraining, job security, performance and layoffs**.

In Quebec, the minimum working conditions arising from technological change are governed by two laws: The Act respecting labour standards and the Act respecting manpower vocational training and qualification. These laws are, however, part of a fairly limited legal framework that currently allows for greater freedom to negotiate technological change under the conditions most suitable to the individual enterprise. They also allow for a more human adjustment, in the sense that there is an opportunity to analyze the problems resulting from implementation of new technologies according to the actual situation or the people concerned – instead of considering the problem from the standpoint of government standards.

In short, introducing these new technologies creates special needs among the employees. The challenge of innovation can be met with adequate training, whether vocational training within the companies or the general education of our young people. Currently, small and medium-sized companies seem to be having trouble recruiting skilled labour: they have limited resources, whether for hiring the skills they need, training them, or keeping them. In fact, skills are a rare commodity... A survey of some 100 owners/managers of businesses reveals that 60% of them are struggling with similar problems. The more complex the technology, the greater the problem[10]. Some companies have had to make up for this scarcity by hiring skilled workers from other countries, which is paradoxical given the unemployment rate, especially among our youth in Quebec! There is therefore a need to **prepare** one's staff to meet the technological challenge.

Even the work of the owners/managers and foremen will have to change along with technology. SMBs need managers who are capable of managing systems in flux, who can lead increasingly well-educated employees. The "human" values of these resources are also different. Younger workers are primarily motivated by the interest they have in their work. There is increasing talk of job satisfaction, participation in goal-setting at work, of commitment, of challenge... Like other companies, SMBs will have to offer conditions that allow for the realization of such aspirations. Thus, the flexibility of small and medium-sized businesses, which is due to their simpler administrative structure and their ability to support more human interpersonal contact, are important factors of success.

The necessary human resources should therefore be prepared so that they can help implement innovation. Training and retraining are key words: they should be an integral part of the job and not take the form of individual, isolated courses.

4.4.3 - Individual Background and Organizational Culture Oriented Towards Technology

The need for technological change in a company is often triggered internally. Often, company performance will trigger a new awareness in the owner/manager. And as demand grows, it is often difficult to motivate the staff to produce more, with as much precision. Technology may therefore be required to solve these productivity problems – and to cut down on production costs. The company may also possibly require more high performance equipment because of the lack of skilled labour. A study conducted by d'Ambroise and Gasse clearly underlines that the lack of skilled labour is by far the first and most crucial of the problems encountered by owners/managers of small and medium-sized manufacturing companies[11].

---

[10] D'AMBROISE, Gérald and GASSE, Yvon, Les défis administratifs quotidiens dans les PME québécoises, Revue Commerce, May 1982 (pp. 50-68).

The word **culture**, in a technological context, refers to the capacity of an individual in a company to evaluate and successfully apply technological developments – according to his knowledge and the company's potential. It is viewing one's environment in terms of innovation and technological possibility! The very personality of an individual is therefore a determining factor in the technological process; and this personality depends on a number of factors, including education, values, information, training and promotions. These elements can help stimulate and develop a culture that is oriented towards technology. And when the individual is the owner/manager of a small or medium-sized business (SMB), the impact of his background is felt throughout the company: in decision-making, management, R&D, employee relations, etc.

Innovation is therefore not merely a function of technological considerations: it also has a managerial and psychological aspect. Meaning that organizational culture, based on the individual background of each of the owners/ managers and employees, is a prerequisite to the implementation of new technology.

4.5 - Patents and Manufacturing Under License

4.5.1 - Definitions

A patent is a "document issued by the federal Patents Office which enables the patentee, who is the creator of an invention or consequently of an improvement described in the patent, to develop (manufacture, use and sell) the object of the patent, commercially and exclusively, for a period of 17 years within the country covered by the patent".[12] Please note that **invention** means producing something that is not yet known: a **new idea** that will be subject to an industrial application. Furthermore, **innovation** refers, in complementary fashion, to the use or introduction of the invention: it is an **adoption** process.

The patent officer will ensure that the following two conditions are met in any patent application: the product or process must be a novelty resulting from an inventive activity, and must lead to an industrial application.

---

[11] GASSE, Yvon, L'adoption des nouvelles technologies: un défi majeur pour les PME, Gestion, September 1983.

[12] Jean Beauchesne, legal counsel for the Centre de recherche industrielle du Québec (CRIQ).

The license is a "contract by which the patentee grants the licensee, either exclusively or not, in return for royalties, the right to manufacture, use and/or sell an invention, product or manufacturing equipment, for a definite period and throughout all or part of the territory covered by the patent"[13].

4.5.2 - Knowledge Available to Everyone

To know or not to know? This is often the difference between the success and failure of a company... Technological knowledge cannot be optimal without patent documents. Did you know that close to 70% of the new technologies in the industrial world are only accessible through patent documents? It is therefore logical that these should be consulted before allocating money for R&D.

The Canadian Patents Office, the fifth largest in the world, has over 25 million patents (of which 1.2 million are Canadian and 4.4 million, American), which it will make available to anyone interested. It is therefore a very important source of technological information. Data from Consumer and Corporate Affairs Canada indicates that, in 1985, Canadians were issued 1,417 patents; this implies a creativity index of 6, based on the number of patents issued per 100,000 inhabitants: by comparison, the Japanese index is 34, the Swiss index, 28; the U.S. index is 16; France's index is 15 and Germany's, 14.

In Canada, the life of a patent is 17 years from the date of issue. Thus, patents issued before April 1, 1970 have already expired and, consequently, have passed into the public domain. The Commissioner of Patents has the power to grant a license to operate a Canadian patent if the latter has not led to a development on Canadian soil within three years following its issue. Why this interest in patents? Because they present a number of advantages compared to other sources of technological information[14].

- Technical data can be extracted from patents in a very selective manner by means of manual classification systems, directories of names, computerized research, etc.

- Since not all patents are protected on all world markets, research can yield numerous techniques that are unprotected in Canada, which may be beneficial to SMBs.

- Inasmuch as the patent underlines the innovative character of an invention by describing its antecedents, it is a summary of the actual status of knowledge in this specific field.

---

[13] Idem

[14] According to William MacDougall, a consultant on intellectual ownership at the Patents Office.

- The patent can generally be used to trace the name and address of the patentee and other interested parties, which will facilitate contact regarding the possible development of the invention.

How, therefore, does one access this technological information? The research facilities of the Patents Office are located in Hull, at the Department of Consumer and Corporate Affairs headquarters, and experienced staff are on hand to give advice on how to carry out this research. A consultant on intellectual property is furthermore available at the CRIQ offices in accordance with an agreement between CRIQ and the Patents Office.

4.5.3 - Limits of Protection Afforded By Patents

It should be noted that the protection afforded by a patent is limited to the territory of the country that issued the patent, and that a patent is limited both in time and in terms of the application of the invention. For example, an expired patent (after 17 years) can be copied, because it becomes part of the public domain and therefore accessible to everyone.

The person applying for the patent must state his claims in clear, explicit terms: exclusive ownership or privilege is usually claimed on items or combinations that are considered new. Thus, the inventor defines precisely what he wants to patent, and determines the field he wishes to appropriate for himself. The protection offered by a patent is clearly a function of the scope of the claim[15], which is why the descriptive brief on the invention must be carefully written.

4.5.4 - How to Benefit from Your Innovations Before They Are Copied?

This is a problem that plagues all companies that innovate. In fact, there is nothing more frustrating than investing time and money into R&D on new products ... only to realize that a competitor has simply copied the product and marketed it at a lower cost! The patent — like registration certificates for industrial designs and union labels — offers legal protection that can prevent the situation from occurring.

Legal safeguards are common practice in big business: they are intimately bound with a daily strategy that aims to make the most of the basis of technological transfer: licensing agreements. These agreements are contracts by which the patentee gives the licensee, either exclusively or not and in return for royalties, the right to manufacture, use and/or sell an invention, product, manufacturing equipment, etc., for a definite period of time, on all or part of the territory covered by the patent[16]. In an industrial context, the expression is **manufacturing under license.**

---

[15] DROUIN, Guy, Industrial Property Agent, "Attention aux revendications", Le Novateur, CRIQ.

It is important to check whether the proposed item is already patented. If such a patent does exist, the company can avoid incurring R&D costs by simply asking for an operating license! And if there is no patent, then the company has every advantage in obtaining one: the patent means that the company can prohibit all other development of the patented product. Also, if it wishes, it can earn additional income by issuing licenses to other companies, and thus profit from its R&D investments! Interesting ideas have an industrial value: they should be protected. Please note that a company can grant a license without applying for a patent first: these are the "rights of development".

The Canadian Patents Office has brochures on the subject (patents, brand names, industrial designs and copyrights). These can be obtained by contacting the Direction générale de la propriété intellectuelle at Consumer and Corporate Affairs Canada.

The cost of processing a patent application is as follows: it costs $150 to file an application for "a small entity" (independent inventor or SMB with a gross annual budget of under $2 million) and $300 for others; small entities will be charged $350 for the patent and the others, $700.

Contracts are subject to the laws governing unfair business practices in order to protect the parties in question. Technological transfer on a contractual basis implies a partnership relationship; however, this form of business is still relatively undeveloped in our country... and a few dishonest people are taking advantage of widespread public ignorance on this subject. Thus, a study conducted by the CRIQ shows that nearly 80% of purchasers, in the absence of specialized consulting services, still have a bitter taste in their mouth as a result of too hasty a transaction. Our advice to the owners/managers of SMBs is to have skilled specialists check the value of the titles, the relevance of the know-how based on the needs of the company, the technical quality of the proposal, and the market's receptiveness to the product or service offered. In a fair agreement, everyone benefits and has the freedom to act; hence the importance of carefully choosing and evaluating one's technological partner.

---

[16] Jean Beauchesne, legal counsel for the Centre de recherche industrielle du Québec (CRIQ)

4.5.5 - Royalties

Royalties are a method of payment. The patentee can dispose of his rights by assignment - and may, at his discretion, sell all or only part of his rights. Since grey matter can be bought, sold, leased or traded like merchandise, the intervening negotiation is a commercial act, which generally leads to a commercial agreement[17] (a brochure on the subject is available through the Government of Quebec, Ministère du Commerce extérieur et du Développement technologique. The Equipe de transfert de technologie at the CRIQ in Montreal has a skilled team of consultants in this field).

Each licensing agreement is special: methods may vary depending on the product, process, the companies or the country[18]. Royalties can be collected based on the volume, the number of units produced, or any other convention. There are "decreasing" royalties (for example, 5% up to $500,000, 4% between $500,000 and $1 million, 3% over $1 million); "fixed" royalties (for example, $30,000 per year); others involve a fixed annual amount, with a percentage on additional amounts realized (for example, $30,000 per year on sums up to $1 million in volume, and 3% on sums exceeding $1 million); royalties with a ceiling (beyond a certain amount, the licensee no longer pays anything). These forms of payment can be combined. Occasionally, the company selling the license may waive its royalties for the first year in order to help the licensee launch the product.

The average royalty rate is between 3% and 8%, but can run as high as 10% and even 12% in a few leading sectors (electronics, gadgets, pharmaceutical, etc.) if the discovery is revolutionary. The rate can also drop below 3% in traditional sectors where competition is fierce (clothing, furniture, toys...).

4.6 - Technology of Transfer: A Challenge for the Small And Medium-Sized Business (SMB)

The context is such that the useful life of products is increasingly shorter (it is currently 5 years while it used to be 25 years in the 1940s). The individual is gradually becoming more important. Furthermore, markets and international competition are tending towards free trade... When the Tokyo Round rate reductions take effect in 1987, over 80% of our Quebec exports will be entering the United States free of duty. What is more, over 90% of our exports will be assessed at under 5%. Similarly, over 70% of U.S. exports will enter Quebec duty free. The average general rate for all U.S. goods entering Canada, will go from 9% to 4% once all the Tokyo Round reductions have been applied. Now if that isn't free trade...[19]

---

[17] Mrs. Andrée Vuillermoz, consultant to the Equipe de transfert de technologie. She is the author of the report Le transfert de technologie: sa définition, son approche, sa réalisation, CRIQ, which we used as a reference source.

[18] LEROY, G., RICHARD, G. and SALLENAVE, J.P., La conquête des marchés extérieurs, Montréal, Agence d'Arc, 2nd ed., 1985.

4.6.1 - A Major Challenge for SMB in Quebec

In recent years, small businesses have created most of the new jobs in Quebec. These companies must continue to exist if we are going to maintain job creation and the creation of new businesses. In order for this to become possible, our SMBs must be able to compete with companies the world over... by producing the best technology in the world. This is the challenge.

The transfer of technology must no longer refer merely to the purchase of industrial licenses or know-how, but to their sale as well. Our SMBs can meet the challenge if they do the following:

- assign priority to the development of human resources;
- make maximum use of the available technological information;
- increase its flexibility and adaptability to the maximum.

4.6.2 - Assign Priority to the Development of Human Resources

If we examine the companies with the best performance, if we look for the source of all innovation or try to identify the cause of all this success, we quickly realize that the fundamental element has to do with the attitude towards human development. In order to shift from a rudimentary technology to another more advanced one, one must obviously train the human resources in the company to adapt to the scheduled changes; however, it is also important to give the employees enough leeway to introduce their own innovations. The greatest token of success and profitability is being able to allow your staff to seek their own fulfillment in their work. Thus, personal goals may coincide with the company's objectives and development. One must therefore be ready to devote a great deal of time to studying human resources: is the right person in the right place at the right time? Secondly, your employees should have some say about how they do their work. Finally, regular acknowledgement is important, as this remains an essential element of personal satisfaction.

Furthermore, the company should ensure that its employees regularly increase their level of knowledge; it must also be open to the new pool of labour and hire young graduates who, very often, contribute original thinking. When you combine this with the experience of the staff already in position, innovation can occur.

---

[19] Ghislain Théberge, visiting professor at Université Laval, Les régions du Québec et le libre-échange. Conference of the Association des commissaires industriels du Québec, Jonquière, October 1986.

4.6.3 - Make Maximum Use of Technological Information

We have seen that the mass of information that currently exists, notably regarding patents, is unfortunately not used enough by many of our SMBs which, instead, spend fortunes on creating things... that already exist! This is an additional challenge: to develop positive attitudes towards information and introduce mechanisms that will yield all the information required to introduce technological modifications. In this respect, the owner/manager of the SMB will have to establish structured programs with his major associates in order to remain in constant contact with his own economic sector. These programs are not necessarily costly to operate: they are mostly of a strategic nature and are often based on a network of personal contacts that have been developed with care.

4.6.4 - Increase Flexibility To the Maximum

In the area of transfers of technology, SMBs have a clear advantage over large companies: namely their capacity to adapt quickly to their environment. Many SMBs do not make full use of this gift. Once again, this observation brings us back to the notion of attitude: this comparative advantage can be used if the concept of flexibility is integrated into the company's style of management and into its strategic plan or mechanisms for employee communication. Flexibility presupposes that the company will not only be able to modify the production shop rapidly, but also adapt to the changing needs, and personalities even, of clients, employees and suppliers.

In short, the transfer of technology in SMBs is closely connected with the vision of their owners/managers. The changes observed in Quebec's economy in the last decade indicate that there is an excellent chance that the technological conversion will be successful. It is up to you!

Chapter 5

Small and Medium-Sized Business and Franchising

Franchising is not entirely a new phenomenon but it does continue to attract large numbers of entrepreneurs. While it may not represent an absolute guarantee of success, the franchise formula inevitably attracts attention because of the image of success and "security" it projects.

Indeed, the future owner/manager feels that, in a franchise, he has a product or service that has proven its worth and which, by the same token, will ensure him instant success... And he is not altogether wrong.

The person planning to operate a franchise business knows that he or she will generally have the benefit of experience acquired by others and thus avoid some of the all-too-numerous errors that lead most businesses to bankruptcy before their tenth year of existence.

The franchisee is therefore, in a way, purchasing a formula, a way of doing things, a product that has already, in most cases, contributed to someone else's prosperity in the past. Yet, the almost instant competence that the franchisee is acquiring also has its price.

The franchisee should normally have personal aptitudes that coincide with the philosophy of the company and apply himself rigorously to the "way of doing things" or "recipe for success" characteristic of the franchise. In the long run, this may prove rather restrictive and even very demanding for someone who wanted to be an entrepreneur so that he could make his own decisions and be his own boss.

Franchising is currently one of the most thriving forms of business. It offers people with limited experience and capital a chance to own and operate their own business. Candidates are numerous, as are business opportunities.

Nevertheless, given the profusion of offers, careful evaluation is becoming increasingly necessary.

The most popular and most flourishing franchises are also the most costly; they are therefore not for everyone. The others, and there are many, smaller in scope and in reputation, are accessible to more people; however, they also involve more risks.

Because of the relative complexity of franchises and of the basic rules for developing this way of doing business, this chapter devotes two sections to franchising. The first describes franchising in Quebec and outlines its economic development. The advantages and the disadvantages to those involved in a franchising transaction, not to mention the various categories of franchise, are also discussed in this first section.

The second section discusses the legal framework governing franchises in Quebec, including for instance the rights and obligations of the parties in a franchise agreement. Finally, legal forms of controlling franchises in the United States and Canada are outlined.

5.1 - Nature and Importance of Franchises

5.1.1 - The Economic Importance of Franchising

The economic activity generated by franchises is acquiring considerable scope. Compilations, studies and other analyses performed by firms specialized in the field and by various franchisers associations have confirmed the extent of the phenomenon.

For instance, according to a study performed by The Naisbitt Group, on behalf of the International Franchise Association, sales by retail franchises in the United States accounted for almost a third of all retail sales in 1985, namely 500 billion dollars.

The consulting firm also predicted that in the year 2000, the overall business volume for U.S. franchises would represent approximately 50% of the retail trade, and 2 to 3 times the amount reported for 1985.

What is more, in Canada, where the retail trade currently reports approximately 1,000 franchisers and 45,000 franchisees, the relative importance of franchises is even more significant. These companies, in fact, accounted for close to 40% of the country's total retail sales in 1986[1], namely 60 billion dollars. In fact, the rate forecast for the end of the century is roughly 65% of all retail sales. Graph 5.1 illustrates the growth of franchise sales.

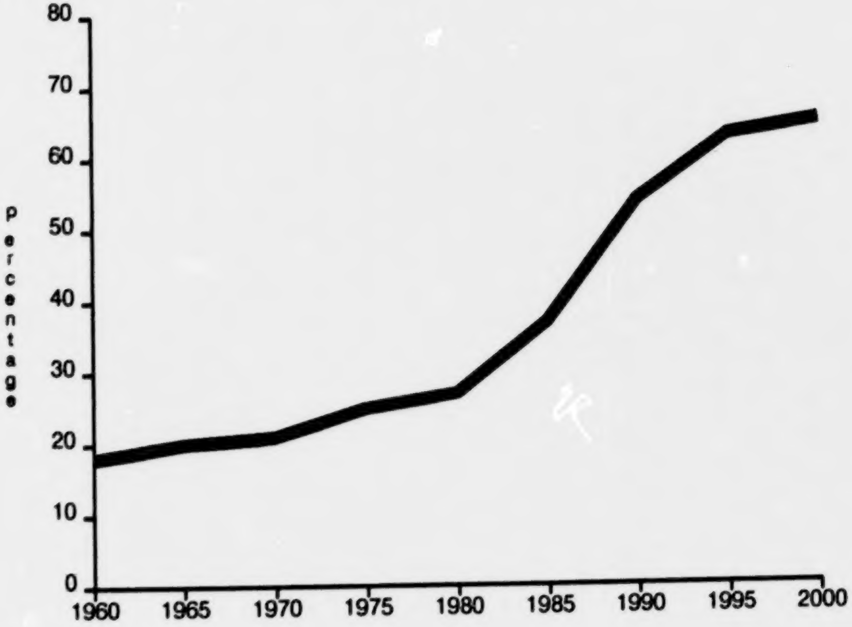
As far as Quebec is concerned, the franchise situation is slightly more modest, all things considered, resembling the situation prevailing in the United States somewhat more. Although the business volume for franchise establishments came to approximately 16 billion dollars in 1986, which is approximately 27% of the Canadian total, Quebec apparently has only 15% of these establishments, or approximately 6,700 franchises. The number of franchisers was somewhere between 125 and 150. Finally, one last figure estimated the number of people employed by franchise establishments in Quebec at 100,000 in 1986 (Graph 5.2).

On the following pages, we will attempt to define the issue of franchising and to

---

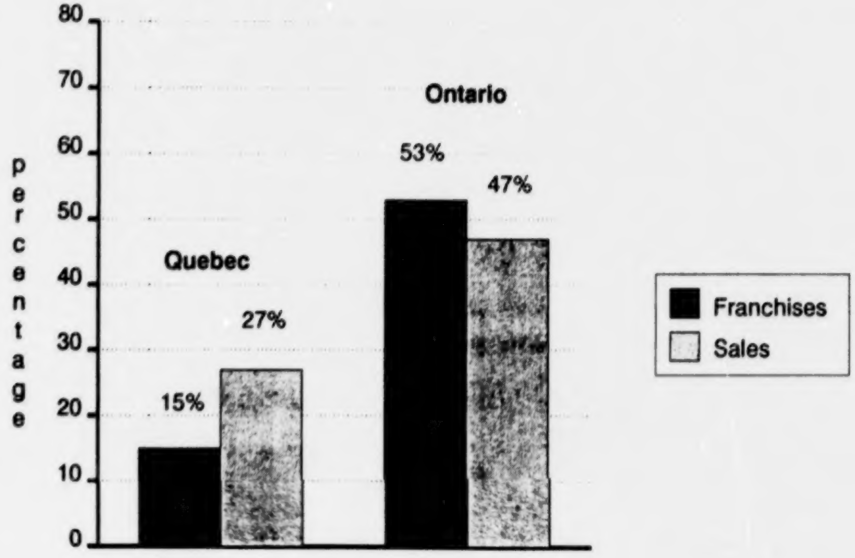
[1] GIRARD, Michel et al., "Le franchisage: une industrie de PME". Le magazine PME, Vol. 3, N^{O} 4, May 1987, pp. 59-68.

Graph 5.1
Percentage of Retail Sales Realized by Franchises



Source: Compiled by the Direction des études sectorielles, DGRP, MIC.

Graph 5.2
Percentage of Canadian Franchises and their Sales
Quebec and Ontario



Source: Le magazine PME, vol. 3, n° 4, May 1987.

identify the characteristics that make this formula an advantageous solution for entrepreneurs, whether franchisers or franchisees. First, let us begin by defining a franchise.

5.1.2 - What is a Franchise?

There is unfortunately no simple, clear definition of what a franchise is. The term is often used to describe a wide range of commercial agreements, the form and content of which may vary from one sector to another and even from one company to another.

In its narrowest sense, it applies to contract agreements authorizing the sale of a product, a process or a service on a given territory, in return for payment of a minimum fee. The product, process or service is marketed under a specific trademark and the franchiser determines the marketing methods that are to be used.

However, a franchise generally involves a certain number of additional elements. One of the first elements to be included in the agreement is that of a continuing relationship between the franchiser and the franchisee. In fact, the International Franchise Association, which represents franchisers, defines the notion of franchising as follows: a franchise is a continuing rapport between the franchiser and the franchisee, in which the franchiser's knowledge, image, success, and production and marketing techniques are placed at the disposal of the franchisee in return for payment. It is thanks to this ongoing rapport that the franchisee is given access to everything the franchiser has to offer: a name, symbols, logos, financial support, direction, professional training, and a product. On the other hand, the franchisee must advance funds, build and maintain an inventory, purchase equipment, maintain a certain level of quality and performance, follow the franchiser's operating procedures, participate in promotional campaigns, and pay fees.

Closer to home, the Institut national sur le franchisage, a Quebec-based organization representing various members of the franchising field, offers the following definition: a contractual relationship between two independent companies, by which one of them (known as the "franchiser") grants the other (known as "franchisee") the right to do business in a particular manner developed by the franchiser, on a specific territory, according to definite standards and under one or more given trademarks or signs, for a limited term, in return for remuneration.

As you can see, the definitions of franchising, and there are others, are fairly similar and are meant to be broad enough to encompass any commercial tie that may be considered as franchising. In spite of the wide variety of agreements that, for a time, govern the business relationship between the franchiser and the franchisee, certain types of franchises can still be identified on the market.

5.1.3 - The Different Types of Franchises

There are generally three main types of franchises: the simple distribution of products or services, the manufacturing of products under license and the trademark. Most franchise establishments currently in operation belong to the first type, namely they simply distribute products or services. In this case, the franchisee markets a product or service, within a given territory, whose percentages and characteristics are almost always determined in advance by the franchiser.

In the case of a franchise for manufacturing products under license, the franchisee, contrary to what occurs in the preceding type of franchise, may to a certain extent define the product he makes. In the latter case, where franchises pertain to trademarks, the franchisee obtains from the franchiser the right to use his trademark. Furthermore, the franchisee is subject to very few controls and need not maintain very close contact with the franchiser afterward.

The first type of franchise is still the most popular today, especially in the retail trade sector. In most cases, the ties between the franchiser and franchisee are very close, the franchiser's follow-up is constant, the organizational and operational procedures are very well defined and the economic health of both is dependent on their joint efforts. In this category, the franchises known as service franchises currently afford the most chance of success, after products.

Service franchises are currently the most easily accessible and the initial costs are still relatively reasonable. The risks inherent in the acquisition of these franchises are therefore reduced inasmuch as the potential for growth is often very promising. The services sector is also very attractive for independent entrepreneurs who would like to develop their companies by becoming franchisers. The advantages of limited risks and attractive potential are equally obvious for them as well.

5.1.4 - A Little History

The phenomenon of franchising is not new and, aside from its first "modern" expressions which already date back a century, the first agreements were concluded in the Middle Ages based on a concept which is at the origin of franchising as we know it today.

At the time, the King of France would grant cities or merchant guilds "franchises" in exchange for certain services. The word "franchise" is derived from franc, which meant "free". The notion of freedom remains inherent in the current meaning of franchising: indeed, the franchiser and franchisee remain independent legal entities; the franchise agreement binding them does not affect their independence under the law[2].

One of the early contemporary cases of franchising dates back to the 1890s, when a few independent salesmen in the United States were authorized to sell electrical and steam-powered automobiles and to perform the maintenance work. In fact, this is the route that General Motors and other companies in the automobile sector later took to broaden their market activities. Franchisees, or what are also known as authorized dealers, were then granted the right to distribute a given make of car without too much interference from the franchiser with regard to sales methods.

The Singer Company, which specializes in the manufacture and sale of sewing machines, was also a pioneer in the field of franchising. In fact, in 1912, it established a large network of points of sale for its products. The oil companies quickly followed suit with their service stations, and soft drink manufacturers with their distribution networks, along with many others who used the formula to enhance their development.

The 1950s and 1960s were to represent a major stage, a sort of franchising "boom", especially with the advent of fast food. Subsequently and since that time, there are few industries in the tertiary sector that have not been influenced by franchising, either directly or indirectly.

Today, there are franchises in almost every field, as well as in increasingly specialized sectors. Almost every aspect of marketing automobiles is handled by franchise, whether sales, maintenance, repairs, leasing, or the sale of parts, etc.

Today, franchising is everywhere, in the hotel and restaurant sector (convenience stores, etc), in home maintenance (decorating, renovation, sale, etc.), clothing (men's fashion, shoes, dry cleaning, etc.), personal grooming (hair, pharmacies, physical fitness, etc.) and in other miscellaneous services (data processing, travel, income tax returns, etc.).

Apparently, the formula still holds a great deal of attraction and should continue to thrive, especially considering how simple it is to set up. In fact, if a commercial enterprise that markets a service, a product or both has made it on its own by marketing its know-how, it can establish the basis for a franchising system and, in all probability, grow even more.

5.2 - Advantages and Disadvantages of Franchising

One of the main attractions of franchising is undeniably the fact that it makes the business world accessible to a whole realm of individuals who would not otherwise have the capital or even the administrative capacity to start their own business. The formula also enables the franchiser to stimulate the growth of his own company without too much risk or trouble, and to increase his territory.

---

[2] SALLENAVE, Jean-Paul, Expansion de votre commerce par le franchisage, ministère de l'Industrie et du Commerce, Québec, 1982, p. 13.

The originality of franchising is that it sets aside the traditional business relationship in which the philosophy of "everyman for himself" prevails, and replaces it with a relationship in which two legally independent entities are bound both economically and contractually.

This business relationship, which is a new concept, implies a number of advantages both for the franchisee and the franchiser. However it also involves mutual obligations and disadvantages. We will analyze a few of these in the next section.

5.2.1 - Advantages to the Franchisee

5.2.1.1 - Easy Start-Up

The person who purchases a franchise is generally acquiring a proven formula, which means that he can avoid the limitations inherent in starting a business (developing an image, establishing goodwill, designing the furnishings, etc.), since the work has already been done by the franchiser. The franchisee therefore has facilities at his disposal that provide a proven and adapted operational environment, as well as a recognized product and image. He will also have the help he needs to find an appropriate location for his establishment.

5.2.1.2 - Transfer of Know-How

The franchisee will also very quickly acquire proven management and operating methods. He thus receives help and advice on how to structure his operations, control product quality, manage and control inventory, set up the accounting and keep it up to date, as well as any other aspect of operating a business.

5.2.1.3 - Initial and Continuing Training

In most cases, the franchiser will offer the new franchisee initial training on how to manage and operate his establishment. The franchiser will furthermore provide support and will be available ongoingly to advise the franchisee in his daily management and on how to settle any problems that may arise.

Some franchisers also have representatives who visit the franchisees periodically. Training meetings can be organized for the managers of these establishments as well.

5.2.1.4 - National and Local Advertising

Through his agreement with the franchisee, the franchiser generally undertakes to carry out national advertising campaigns to promote his product or service, as well as a more local advertising campaign to promote the franchisee's own establishment. Thus, the latter normally benefits from the know-how of large firms that specialize in marketing, which would probably have been impossible on a individual basis.

5.2.1.5 - Better Credit Rating

With a franchise with a well-established name, the franchisee automatically enjoys a better credit rating and can, consequently, obtain better rates on routine operating loans. Occasionally, the franchiser can also secure loans for specific projects for the franchisee. Many large franchisers offer long- term financing for the purchase of equipment.

5.2.1.6 - Purchasing of Goods and Services at a Lower Cost

When there are a number of franchisees in a franchise, their numbers give them a certain amount of buying power and they may therefore benefit from lower purchase prices on current products, equipment and services.

5.2.1.7 - Research and Development Program

The large franchiser generally has enough funds to research and develop new products or new internal management techniques. The franchisee therefore benefits from a whole other aspect that is entirely foreign to a small independent businesses.

5.2.1.8 - Synergistic Effects

The larger the number of franchisees, the more numerous the individual experiences with respect to just about every aspect of managing a business. The franchisees can therefore easily exchange the knowledge they have gained from both negative and positive situations.

One interesting aspect in this regard is the possibility of testing the receptiveness to a new product, by evaluating customer reaction. The experiment can be carried out with a limited number of franchisees and the results communicated to everyone, with relatively little risk. The franchisees running the test generally receive financial assistance from the franchisers. The synergistic effect is also very significant for the franchise's reputation. The greater the number of franchises, the greater the notoriety of the franchise and the greater the income.

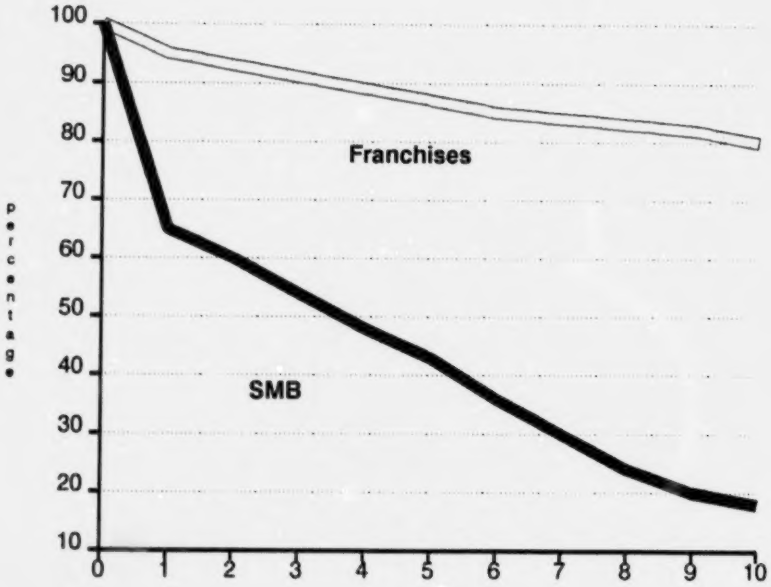
5.2.1.9 - Reduced Risk of Bankruptcy

Many internal studies of franchising organizations have demonstrated that the risk of bankruptcy is much lower among enterprises operating a franchise than among independent enterprises, especially in the early stages (Graph 5.3).

However, these studies tend to overestimate the degree of success of the franchises somewhat, since enterprises of this type are not, after all, completely shielded from failure.

The International Franchise Association estimates the bankruptcy rate at less than 10% for the entire franchising industry. This is an average, of course, and while the bankruptcy rate is indeed very low among well-known franchises, it can be relatively high among small or new franchisers. The proliferation of the latter in recent years should therefore inspire caution in anyone interested in the formula.

Graph 5.3
Survival Rate: SMB and Franchises
First Ten Years of Existence



Source: According to an estimate by the Direction des études sectorielles, DGRP, MIC.

5.2.2 - Disadvantages to the Franchisee

5.2.2.1 - The Cost

One of the major inconveniences of purchasing a franchise is the purchase price and the share of the sales volume that is paid to the franchiser. In fact, the initial fee or purchasing cost is becoming increasingly high, especially if the franchise has a good reputation.

For instance, in the fast food sector, the initial cost of a recognized franchise, which used to be 25% of the projected annual volume a few years ago, has now increased to 50%. And since the annual business volume can easily come to a few million dollars these days, the cost is enormous, even making the franchise inaccessible to most people.

The cost of purchasing a less well-known franchise, even if it is only nominally less important, may also prove proportionally just as high if the sums advanced buy you little or no notoriety. In addition to the initial cost are the royalties, namely a certain percentage of the business volume that is paid to the franchiser periodically. The rate generally ranges between 2% and 14%, depending on the caliber of the franchise and the services offered by the franchiser (especially the promotional campaigns).

5.2.2.2 - Mandatory Compliance with All Clauses

As a result of his agreement with the franchiser, the franchisee may perhaps have undertaken to market one or more products that are difficult to sell on his territory. He might also be required to follow policies and commercial practices which, while beneficial to other franchisees, can be damaging to his business and harmful to his profitability. Finally, in the case of breach of contract or a misunderstanding, the franchisee is generally at the franchiser's mercy and rarely emerges victorious in conflicts of this type.

5.2.2.3 - Restrictive Physical Requirements

Unlike what most people think, operating a franchise very often demands a very active physical contribution on the part of the franchisee as well as long hours of work, even after years of existence in many cases.

5.2.2.4 - Effacement of the Franchisee

One of the most significant disappointments that await business people who purchase a franchise is that a business of this type rarely satisfies the need for independence which, among other factors, had motivated their decision. In fact, because of the very strict controls exercised by the franchiser, the new franchisee very often discovers that he is merely a manager and not a real entrepreneur, contrary to what he had hoped.

5.2.2.5 - Inequality of Franchisee-Franchiser Relationship

This situation is often the result of contractual clauses which the franchisee had little choice about accepting when he signed the initial agreement. The franchisee is therefore in a weakened position because, when he renews the agreement, he will again have to bow to the demands of the franchiser.

Equally because of this unfavourable balance of power, the franchisee will find it very difficult, given the rights of the franchiser, to sell or transfer his business; in some cases, he may have to yield entirely to the conditions and demands of the franchiser.

5.2.3 - Advantages to the Franchiser

One might well conclude that, in the area of franchising, advantages to the franchiser are disadvantages to the franchisee, but there is more. In fact, the relationship between franchiser and franchisee is not based on confrontation but rather on cooperation, the success of the one being intimately bound with that of the other.

The franchising formula enables the entrepreneur who wants to expand his business to do so with relatively limited means. He will require less capital to expand his horizons and will be able to do so with less risk. He will be able to count on motivated partners (franchisees) who will moreover take over the demanding tasks of daily management.

Thus, these partners will help minimize the operating costs of the company, while representing a major and reliable source of information on market trends and new customer needs.

The increased number of points of sale will enable the franchiser to gradually increase his income, improve his economies of scale and minimize the risk of failure, the consequences of which would, in any case, be entirely absorbed by the franchisee.

5.2.4 - Disadvantages to the Franchiser

The franchiser must, on the other hand, give up part of his income and profits. The coordination required to modify a policy or administrative practice among the franchisees may be lengthy and difficult. An error in the selection of a franchisee can prejudice the company, each franchisee being a vehicle for the image of the franchise as a whole. Administrative, regulatory and legal constraints will also multiply with time and increase the burden on the franchiser.

5.3 - The Success of the Franchising Formula

One of the first elements underpinning the success of franchising is without a doubt the accessibility of the formula. Franchising, in fact, can give anyone who has ever dreamed of controlling his own destiny the impression that his dream is finally coming true. The different types of franchise are all available and they have proven themselves; all you have to do is pick one to finally become your own boss and - why not? - an eminent entrepreneur.

Franchising also eliminates the need to build one's own enterprise out of nothing, with every problem imaginable and the risks that this may involve.

A second important element in the success of franchising is the simplicity and originality of the concept. In exchange for payment of an initial fee and periodic royalties, a person may, on the one hand, acquire a proven formula that enables him/her to earn an income and, on the other hand, benefit from permanent support that will continuously help broaden the target clientele and the market (Graph 5.4).

Another factor of success in franchising is that such companies are constantly planning for growth. They can therefore systematically attack almost any target market that interests them and make optimum use of the income they derive from their present activities.

The success of franchises is also generally the result of the competence of their managers.

They normally employ very feisty people, with an almost identical general profile, who all intend to succeed by the same means.

The positive image of franchises is also an element of their success. This image, which is in fact meant to be dynamic, attuned to the whims of the clientele and open to change, strengthens the credibility of the franchise in general and attracts customers who consider themselves well served, in general.

The success of franchising can also usually be ascribed to the almost permanent support the franchiser grants his franchisees. The support may take the form of market surveys, research and development of new products, new methods of management, quality control, and performance evaluations. All of this obviously helps keep the whole franchise organization on the leading edge and also prevents too many problems from arising.

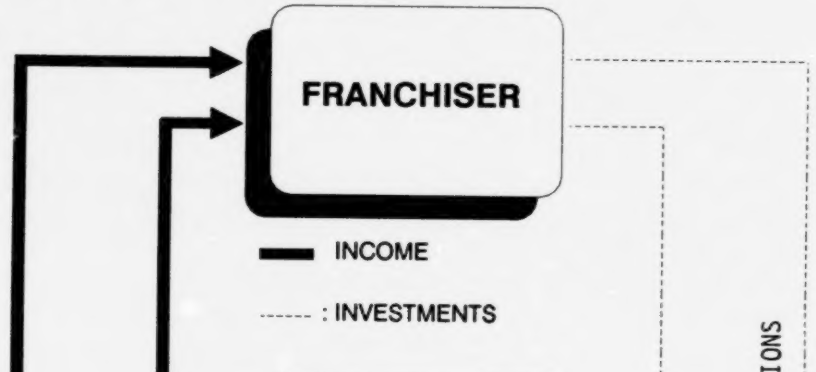
Finally, franchises generally represent an important economic force. As a result, they exercise better control over the quality and quantity of their supply, have access to more effective advertising, etc.

This list of major factors in the success of franchising is not meant to be exhaustive. Many other elements, often mere details, contribute to the success of these businesses. Existing franchises all have their own peculiarities and their own special recipes that lead to success. However, there is one essential element that they all share, without exception, namely that they have faith in their success from the outset. In this sense, franchises are no different from any other commercial organization on which fortune has smiled.

5.4 - Factors to Consider Before Buying a Franchise

The person planning to launch into franchising should be very careful before making a decision. In fact, franchise offers have continued to multiply over the years and not all afford the same value or the same prospects. The largest and best-known franchisers have waiting lists of potential buyers. These franchisers can therefore be very

Graph 5.4
General Diagram of a Franchise Agreement



FRANCHISER
INCOME
: INVESTMENTS
CLIENTS
ROYALTIES
INITIAL FEES
INCOME
SALE OF PRODUCT
FORMULA
PERMANENT CONTRIBUTIONS
FRANCHISES

Source: Expansion de votre commerce par le franchisage, MIC.

demanding, and only the candidates with the best business qualifications will be selected.

In the case of the smaller or less well known franchises, there are generally more franchises for sale than there are applicants; caution must therefore be exercised. Before purchasing a franchise of this type, the potential franchisee should ask for information about certain points.

5.4.1 - The Franchiser

The franchiser should be in a sound financial position and have a satisfactory credit rating and a good reputation. He ought to have been in business long enough for his product or service to have proven itself.

The franchiser should be willing to disclose details about his financial past. He should also provide information on the number of franchises that are currently in operation and the number of people who have signed commitments to purchase new franchises. The interested party should ask for information about the franchises that went bankrupt and the circumstances surrounding these bankruptcies. He/she should also talk to people already operating franchises, but not through the franchiser.

Yet even with these precautions, it is not always easy to determine the risks and the possibilities inherent in a new franchise. Nevertheless, the financial position of the franchiser and the content of his development plan are normally a good starting point.

Similarly, established franchises originating elsewhere should always be dealt with carefully: a formula that has been successful abroad may not be perfectly suited to a specific market, such as Quebec. In any case, with this type of franchise, the first few franchisees are usually the ones who pay the price for the adjustments that were not made first. The development plan of such a franchiser should therefore take into account the particularities of a new territory.

Normally, one might expect that a franchiser who is really committed to developing his company via franchising will do so by involving the franchisees, not as branch managers but as serious associates.

5.4.2 - Franchise Costs and the Income

Costs relative to a franchise should be clearly determined. The franchisee should be able to pinpoint fairly precisely those sums that he will have to pay as an initial fee, as royalties, as well as what he will receive in return. For instance, the franchiser should clearly indicate what is included in the initial costs, what it takes to acquire the necessary basic capital, where the franchisee will have to get his financing and what the conditions of this financing will be.

The future franchisee should also try to obtain details about the sums required to purchase or lease equipment, the equipment suppliers and the relevance of the price quoted. Credit conditions for current operations will have to be advantageous. Responsibility for late start-up of franchise opertions and for late delivery of raw materials, plus the resulting charges, should be clearly established. These are just some of the financial issues that the franchisee must consider.

Also on the financial level, it should finally be noted that many franchising associations have reported complaints filed by their members regarding the pro forma statements of income and expenses developed by the franchisers. The latter generally tend to overestimate incoming funds and underestimate expenses. In most cases, the initial business volume is rarely as high as projected, thus weakening the franchisee's financial position from the outset.

5.4.3 - The Product or Service

The product or service being marketed is always the first item that attracts attention in a franchise. It must first satisfy a need in the target market. Also, it should be of excellent, consistent and uniform quality at all points of sale.

The franchise, the product (or service) and the way it is marketed make up what we call the "formula". If this formula is to be successful, it has to have been tested. A good way of finding out if a formula has a chance of succeeding is to apply what is known as the three-in-two rule[3]. According to many in the field, this is a relatively reliable way of discovering the economic viability of a franchise.

Three-in-two, means that the franchiser has himself opened at least three points of sale in the last two years: the first in a major city, a second in a large town and a third in a secondary town. In so doing, he will have tested his formula on three markets with different characteristics and clienteles. He will himself have experienced the start-up problems encountered at each of these points of sale and which will be encountered by all future franchisees. Two years would be the minimum period for dealing with all the difficulties relative to a start-up period. However, this rule is certainly not a sine-qua-non to the decision to acquire a given franchise; one need only consider the new or relatively new franchisers who are attempting to penetrate the market and to whom this rule does not apply. But wherever it is applicable, the formula is most certainly a good indication of the general strength of a franchising formula.

5.4.4 - Legal Aspects and Contracts

Purchasing a franchise involves legal aspects that have become increasingly restrictive over time. Because of the growing popularity of these business formulas, various pressures are being brought to bear to develop regulations that will govern this area of activity where abuses of all types are beginning to occur.

---

[3] GAST, Olivier et MENDELSOHN, Martin, Comment négocier une franchise, Éditions de l'Usine Nouvelle, Paris, 1983, 140 p.

Furthermore, the contracts that bind the franchiser and franchisee are becoming increasingly long and complex and require extreme vigilance on the part of the franchisee. The legal aspects of franchising are a cornerstone of the success of the franchisee and the resulting agreements should be to the satisfaction of both the parties; otherwise the enterprise may not prove very viable for either party in the short term.

The potential franchisee would do well to consult professionals and legal experts to ensure that his agreement with the franchiser will bring him complete satisfaction and prosperity. A later section has been devoted to the legal and contractual aspects of franchising.

5.4.5 - Location and Territorial Exclusivity

Another major factor that should be examined when purchasing a franchise is the location of the business. With some types of franchise, potential franchisees should even find out on which side of the street the physical facilities are to be located. Accessibility, custom, the type of clientele in the area and other such elements are all very important to the success of a franchise. Of course, guaranteed territorial exclusivity should normally be part of the franchise contract.

5.4.6 - Franchisee Selection Criteria

The franchisee should ask the franchiser about the type of candidates he is looking for. Are the minimum requirements in terms of experience and qualifications adequate and can he meet these demands? Is a certain amount of rigour applied in the selection of candidates? All these questions are important since a poor choice of franchisee could hinder the entire franchise and its members.

Once again, the list of analytical criteria for the purchase of a franchise is not meant to be exhaustive. While the major points have been mentioned, many more deserve equal attention. Ultimately, as with any commercial enterprise, the more relevant information one has, the better the chances of success.

5.5 - Sources of Information on Franchises

People planning to go into franchising generally have several sources of information available to them: newspapers, magazines, periodicals, etc. Nowadays, they can also count on a number of consultants and specialists in the field to guide their choice. Below is a list of the many sources of information available to future franchisees.

5.5.1 - The Dailies

The "Business" or "Economic" sections of the major dailies generally contain articles and advertising on the franchises available in a particular area. The issue is also occasionally discussed in special feature articles. Finally, the classified ads may prove another source of information on franchises.

5.5.2 - Business Publications

These newspapers, which are normally published on a weekly or monthly basis, often contain, apart from general news about franchisers, in-depth articles on a specific sector of franchising, or on a particular aspect of the operation of this formula.

5.5.3 - Trade Publications

These are books or magazines devoted entirely to the subject of franchising. Most of the municipal libraries have a list of these publications available for consultation.

5.5.4 - Franchiser Associations

The Association of Canadian Franchisers and the Institut national sur le franchisage are just two of the organizations whose role is to provide information and assistance to people interested in franchising.

There are also numerous organizations of this type in other countries and these too can be consulted given the increasingly marked international character of franchising. These organizations also publish articles and documents about franchising; in most cases, this includes lists of their members or existing franchises in the country where they are located.

For instance, the Institut national sur le franchisage, as we mentioned earlier, is a non-profit organization located in Quebec and is devoted to improving the franchising industry in Quebec. The organization, founded in 1984, provides people in the field, or planning to enter the field, with objective information on franchising, from both a practical and theoretical standpoint.

The Institut, among other activities, distributes general information, recommends training activities and publishes a directory of franchisers.

A second Quebec organization is the Association des franchiseurs du Québec. The AFQ was founded in October 1985 and is the Quebec division of the Association of Canadian Franchisers.

The purpose of the Association is to provide the franchising industry with more visibility and to define and clarify the relationship between franchiser, franchisee and consumer.

5.5.5 - Conventions, Trade Shows, Exhibitions, Conferences, Etc.

An event of this type is often an ideal opportunity to obtain all kinds of information about franchising and available franchises, and to meet people in the field.

Among the most notable events in Quebec, in recent years, is the Salon de la franchise, held each spring, whose primary mission is to bring franchisers and potential franchisees together and to offer them the services of various legal and administrative consultants.

There is also the Salon de la PME and the Salon du monde des affaires where exhibitors and consultants discuss franchising in conferences, panel discussions, etc.

5.5.6 - Banks and Financial Institutions

Almost any bank or financial institution can provide their clients with various studies and brochures on franchising. The Federal Business Development Bank is also a very useful reference organization.

5.5.7 - Franchising Professionals

Because of the complexity of the contracts and the legislation on franchising, it may often be necessary to consult experts in various areas before launching into the field. Lawyers, notaries, and accountants (some of whom are specialized in franchising) are all people whose services can be retained as required for precise and impartial opinions.

Franchising consultants and agencies have also begun to appear lately and these may be able to offer advice and supply information to the future franchisee. It should be noted however that, in the case of franchising agencies, these are generally sales representatives specializing in franchises and that their opinion may not always be impartial.

5.6 - The Legal Framework for Franchises in Quebec

Franchises nowadays are ideal springboards for the development and growth of business, especially in the restaurant and retail sectors. In the United States, half of every dollar spent in the 1990's will go to a franchise. This very "fashionable" business concept is also very present in Quebec; to the extent that two international franchise shows have already been held in Montreal in 1986 and 1987. And how has Quebec's legislative body responded to the lightning rise of franchising as an economic activity? Are we dealing with a highly regulated sector in which most situations are governed by law or, on the contrary, is this a business formula that is only slightly or not at all affected by legislative activity? The following section, which outlines the legal position of franchises in Quebec, offers a few hints for future investors planning to enter the business world via a franchise.

5.6.1 - Governing Without Legislating

In Quebec, there is no direct or specific legislation governing franchising. Is this to say that the business concept is not governed by any rule of law? To answer this question, we should examine the actual nature of the relationship that is established when a franchise is created. A franchise is the result of the willingness of two parties to do business under specific conditions and in accordance with well defined objectives. This mutual commitment, which is most often expressed in the signing of the document (a verbal agreement may also exist), belongs to the realm of contracts. And, contracts are governed by the general regulations of Common Law and the basic contract system to be found in the Civil Code. Thus, there are rules of law that are applicable to franchises in Quebec, even though there is no specific legislation to support them.

In fact, when one talks franchising, one is talking about a commercial contract that is subject to the rules of the Civil Code. The situation is all the more applicable in that legislation dealing specifically with the franchise sector recognizes the contractual basis of franchising from the outset. For instance, this is the definition contained in the American law[4]:

> The term "franchise" signifies any ongoing commercial relationship created by **one or more arrangements** in which (...)

The Code of Ethics of the Fédération européenne du franchisage, while containing only rules of ethics, offers in its preamble the following definition of franchising[5]:

> Franchising is defined, in the context of this code,as a **method of contractual cooperation** between two legallyindependent and equal parties (....)

The contract is therefore the cornerstone of the franchising system. Every aspect of the franchising relationship depends on this agreement. And because the legal system applicable to the franchising sector in Quebec is essentially built on the rules of Common Law, a discussion of the latter's mechanisms is also required.

5.6.1.1 - A "Business" Contract

The provisions relative to contracts are contained in the chapter on "Obligations" in the Civil Code. The definition of an obligation according to civil law is therefore useful to a relevant grasp of the scope of the law. As Baudoin reminds us: Obligation is a legal tie by which a person, known as the debtor, is obligated to another, known as the creditor, to make retribution, which shall consist in giving, doing, or not doing something, under threat of a legal distraint against the debtor's equity[6]. When a contract is concluded, we are therefore in the presence of a legal tie between two people, whether they be physical (an individual) or moral (a company).

There is an important distinction to be made here. The Civil Code enumerates certain types of contracts and contains provisions governing them: these include, among others, sale, gifts, lease, and loan. However, there are categories of contracts other than those

---

[4] Federal Trade Commission, Disclosures Requirements and Prohibitions concerning Franchising and Business Opportunity Venture, 16 C.F.R., Section 436.

[5] Excerpts from the Code of Ethics of the Fédération européenne du franchisage, presented in: GAST, Olivier and MENDELSOHN, Martin (1983), Comment négocier une franchise, Éd. de l'Usine nouvelle.

[6] BAUDOIN, Jean-Louis (1983), Les Obligations, Éd. Yvon Blais Inc.

Clauses in a sample contract

1.Contractual Framework
  - awarding franchise
  - exclusive territory
  - restrictions

2.Provisions of Agreement

3.Rights
  - initial payment
  - additional payments
  - definition of "sales"
  - books and accounting
  - certified documents

4.Local
  - construction
  - use
  - purchase of equipment
  - scope of agreement

5.Operating Standards and Conditions
  - building
  - means of identification
  - neon signatures
  - equipment
  - selling materials
  - operations guide
  - competition
  - sources of supply
  - hiring policy
  - inspection
  - discretion

6.Technical Assistance and Training
  - training of management personnel
  - training of employees
  - management seminars
  - costs to franchisee
  - technical assistance program

7.Advertising and Sales Promotion
  - national advertising
  - promotional elements
  - responsibility of franchisee
  - use of trademarks
  - promotional materials

8.Insurance and Compensation

9.General Provisions
  - taxes
  - options at close of contract
    - modernization
    - moving
    - new agreement
    - rights
    - notice
  - assigment, default, bankruptcy
  - abandonment of business
  - failure to pay
  - infractions regarding trademarks
  - other limitations
  - litigation
  - expiry of contract

10.Procedures
  - interpretation
  - agreement
  - applicable laws
  - notice
  - competent tribunal

mentioned in the Code: the franchise contract is among these. This distinction between contract categories is based on the fact that a changing society and economy will generate new contract formulas that were unforeseeable at the time the law was drafted or amended. This distinction is useful because, in the case of litigation, it will condition the interpretation of the courts.

If a contract is to be considered valid from a legal standpoint, in the field of franchising or in any other sector where a contractual relationship is involved, the specific rules governing its creation must be followed. These conditions can include the parties' capacity to contract and their free and informed consent. Specific conditions also govern the object of the contract. With respect to the actual form of the contract, flexibility is the general rule: no specific format is required to ensure the validity of the contract.

5.6.1.2 - As Many Clauses as Necessary

In the absence of specific rules of law governing the content of the franchising contract, the latter will have to make provisions for all the elements arising out of the franchiser-franchisee relationship. Thus, in a sense, the parties to the contract make their own law; hence the importance of the provisions to which the parties may mutually agree. This is the reason for the many clauses contained in a franchising contract.

A franchise contract usually contains general operating principles, stipulations regarding unsecured funds (profits, for instance), details regarding the rights and obligations of each of the parties, conditions respecting the territory and the term of the franchise contract, inspection procedures, confidentiality, non-competition, etc.[7] Parties to the franchise contract will however have to ensure that their contract remains within the permissible limits of the law and public order.

5.6.1.3 - The Weight of the Franchiser

Franchising contracts are generally documents that are "ready to sign", somewhat like other membership contracts (insurance, bank financing, for instance). The franchiser generally presents his future partners with a copy of a contract that contains numerous clauses.

Whether a service, product or distribution franchise, the nature of the commercial enterprise is characterized by three elements, elements that clearly indicate that the balance of economic power weighs in favour of the franchiser. These elements are 1) the distribution of merchandise or services identified by the franchiser's trademark; 2) substantial assistance from the franchiser with respect to the operating methods to be used by the franchisee; 3) the franchisee's obligation to pay a sum of money to the franchiser.

---

[7] A detailed discussion of the clauses normally included in a franchise contract can be found in: GAGNON, Jean-H. (1986), La franchise au Québec, Éd. Wilson et Lafleur Martel ltée.

The hope of rapid gain, given the proven success of the concept, often leads franchisees to trust the franchiser and not thoroughly examine each of the clauses in the contract. Failure to examine the contract thoroughly can leave the franchisees in an unfavourable position, depending on the case.

While the success of the franchisee implies the success of the franchiser, the fact nonetheless remains that the equilibrium between the parties is predetermined when it comes to establishing the rights and obligations of each party and protecting their respective patrimony. In fact, in the course of operations and in conflict situations, the franchiser will tend to interpret certain clauses of the contract in his favour, even going so far as to brandish the spectre of contract termination in the event of a persistent disagreement.

5.6.1.4 - In the Event of Disagreement

When two parties decide to establish a contractual relationship between them, the object being the right of the franchisee to do business in the manner established by the franchiser, they make provisions from the outset for the rights and obligations of each, as well as for the rules governing activities connected with operating the franchise. Disagreements may however develop along the way, regarding the interpretation of certain clauses of the franchise contract, or even actual non-compliance with certain of these clauses.

Both the franchiser and the franchisee can be the source of the problem. For example, when a franchiser fails to proceed with the national advertising following the payment of costs by the franchisee, or when a franchisee fails to secure his supplies in the manner prescribed in the agreement, this can seriously harm the relationship between the parties. More generally, the main problems that arise are connected with the term of the agreement and its renewal, with the defined territory, standards, the use of trademarks, miscellaneous payments, and the transfer of the franchise.

Once signed, the contract is not left to its own devices. A legal system has been provided to enforce it. The franchiser may, for instance, have to exercise certain rights or fulfill certain obligations on behalf of the franchisee when the latter neglects or refuses to do so. Legal recourse available to the parties to correct situations that are deemed unacceptable include: recovery of sums owing, claims for interest, injunction, judicial sequestration, seizure before judgment, and arbitration. These forms of juridical recourse and of resolution of conflict thus ensure the satisfaction of the rights and privileges accorded to the franchiser and the franchisee by the contract.

5.6.2 - Support on Several Fronts

The absence of specific legislation on franchising does not mean that the franchising relationship is without legal restraint. On the one hand, the provisions of the Civil Code pertaining to contracts are evidence of this. On the other hand, because a franchise can take a number of forms, such as product, trademark and operating franchises, there is other legislation that indirectly concerns the field of franchising. A brief survey of these laws will, at this point, complete the picture of the legislation applicable to franchising.

Most of the laws aim to protect the so-called "incorporeal" assets, as opposed to the material assets of a company, such as inventory and merchandise. Incorporeal assets include goodwill, and the company's rights with respect to name and visual signature.

5.6.2.1 - Federal Standards

Many federal laws have some application in Quebec with respect to protecting incorporeal assets.

A. Trade Marks Act

This law defines the legal protection afforded by a trademark, commercial name or distinctive device. This legislative tool ensures that the source of goods and services is identified, thus helping to avoid confusion, as the trademark is reserved for the exclusive use of its owner.

B. Unfair Competition Act

Commercial practices and infractions with respect to competition are regulated by this law. Furthermore, a competent court can examine various practices, notably those involving exclusive trade, market limitations and conditional sales.

C. Copyright Act

Exclusive production or reproduction of a specific work is the principal object of this law. Legal protection is therefore provided for operating manuals, forms, etc.

D. Industrial Design Act

This law protects industrial design, namely the characteristic elements of a shape, both at the visual and functional level.

E. Patent Act

This law covers inventions associated with the franchising system. It protects the processes or equipment developed by the owner.

5.6.2.2 - Standards in Quebec

In addition to the standards governing contracts, Quebec has a certain number of laws that apply to franchising, without however dealing with them directly. Tax laws, labour laws and laws governing the various permits that a company must have all apply to franchises as well.

5.6.3 - Support For Franchising

With respect to the partners in the commercial operation defined as franchising, the legal framework in Quebec is principally limited to the document that they themselves filed, namely the contract. There is no legislation specific to the field of franchising, aside from the Common Law on contracts; only sectorial legislation will, if necessary, protect certain elements of the franchising activity.

Given that the relationship between the parties seems to translate into a position of strength for the franchiser and position of weakness for the franchisee, one may wonder whether additional regulations would be appropriate to restore the balance of power. In order to answer the question adequately, it is essential that we first examine the potential scope of franchise regulations.

5.6.3.1 - Regulatory Levels

Three levels of control, ranging from less restrictive to more coercive measures, can protect investors interested in franchises.

A. Disclosure of Information

The first level involves establishing a system that will force the franchiser to inform the franchisee adequately, so that the latter can examine the franchise offer according to its merits. Generally, the categories of information that must be supplied by the franchiser are determined by regulation.

In the context of Quebec, this procedure is reminiscent of a company which, in order to proceed with a public share issue, must provide future shareholders with a prospectus containing information about the company.

B. Registering the Franchiser

The second level of control involves the franchiser and a public monitoring agency. The mechanism entails registering the franchiser with this organization, which then ensures the appropriate control. It would offer future franchisees more protection than the mere disclosure of information.

Registration of the franchiser with a competent authority constituted by law is demanding for the franchiser and reassuring for the franchisee. It is a demanding procedure because registration is conditional on the disclosure of a whole set of information and on compliance with several conditions, such as solvency, the deposit of sums of money, and placing initial franchise fees in trust until certain obligations have been met. It is also a reassuring process because the potential investor has access to the information he needs to make a complete evaluation both of the project and of the seriousness of the franchiser who has undergone these various stages of "accreditation".

The obligation that a company wishing to hold a public share issue register with the Commission des valeurs mobilières du Québec is a good example of the procedure involved here.

C. Following the Transaction

A third level of control can be exercised by setting up a complete juridical system that would determine both the rights and obligations of all parties as well as the applicable penalties and recourses. This category would include the provisions for granting rights and recourse to franchisees when the franchiser introduces practices that are deemed abnormal compared to com-

INFORMATION – INFORMATION – INFORMATION

1. Legal identification of franchiser
2. Professional experience of directors or managers of franchiser's business
3. Professional experience of franchiser
4. Legal background in terms of franchising system (fraudulent actions, unfair practices...)
5. History of solvency of personnel associated with franchiser
6. Description of franchise offered to franchisee
7. Total funds payable in initial fees by the franchisee
8. Periodic installments to be made by the franchisee for continued operation of the franchise
9. Identification of anyone with whom the franchisee must deal
10. Mandatory purchases by franchisee (products, signs...)
11. Revenues allocated to franchiser with respect to purchases made by franchisees
12. Financial arrangements offered by franchiser
13. Restrictions relative to sale by franchisee (limitations with respect to products, geographical sector...)
14. Statement of level of participation of franchisee in franchise activity
15. Franchise contract provisions regarding term of contract, conditions for renewal, cancellation, sale, purchase...
16. Statistics regarding location of franchises, total number and growth.
17. Method of selecting sites and waiting periods between signature and selection of site
18. Franchiser's training program (nature, cost...)
19. Information on personalities participating in franchise promotion
20. Financial position of franchiser for most recent financial year

Summary of information categories required by the Federal Trade Commissio and described in: "Disclosures Requirements and Prohibitions concernin Franchising and Business Opportunity Ventures" 16 C.F.R., Section 436.

mon business practices. The authority controlling the registration of the franchiser is also generally responsible for inspecting the contractual ties.

Specific measures can also be adopted in the context of control, supervision and monitoring of the franchiser's activities. These include, for instance, the violation of the franchisee's exclusive territory, the unreasonable prohibition of a franchise transfer, conclusion of an agreement for less than the minimum term provided by law, and the limiting of legal action under special conditions.

5.6.3.2 - "Regulations" In Action

The forms of regulatory control described above have had various applications outside Quebec. A succinct examination of these will enable us to appreciate the relevance of regulating franchising in Quebec and to determine the most appropriate mode of control, according to the circumstance. The American and Canadian experiences are discussed here in this spirit.

A. United States

Most of the legislation respecting franchising appeared in the United States in the 70's. Some fifteen American states have intervened in this regulatory field to prescribe measures relative to the mandatory disclosure of information and, for some, to demand franchiser registration procedures. The federal government also legislated in 1979 to establish a national regulatory program for franchising.

At the federal level, franchising is controlled by the Federal Trade Commission. In fact, the organization passed Regulation 436 "Disclosures Requirements and Prohibitions concerning Franchising and Business Opportunity Ventures" by virtue of which the franchiser must supply the potential franchisee with a document of disclosure, a draft franchise contract and related documents within a specific time period. Because of the differences that exist from state to state in the U.S., the North American Securities Administrators Association has developed a form for enforcing the provisions of the federal regulations while meeting the requirements of the various states. This form, known as the "Uniform Franchise Offering Circular", has been approved by the Federal Trade Commission as well. Federal legislation therefore applies in all U.S. states, and additional measures may be required in states that have legislated in this field expressly. This is to say that the rule of predominance applies, namely that the strictest standard is in effect.

Though the federal system provides for the mandatory disclosure of relevant information, it in no way requires registration or the filing of documents with the Federal Trade Commission. In this sense, it is a regulatory control of the first level. As for the body of information that a franchiser must put together in order to recruit franchisees, it includes the 20 categories that were enumerated above when the first level of regulatory control was discussed. The information must be distributed to the franchisee 10 days before any agreement is concluded between the parties or before any first payment is made in consideration of the transaction. What is more, the information must be updated periodically.

Under the U.S. federal system, the organization responsible for enforcing Regulation 436, the Federal Trade Commission, can impose fines (maximum $10,000) and institute legal proceedings for interest on behalf of franchisees. These provisions of American law pertain to the third level of control: the system ensures that operating conditions are met, by means of penalties and juridical recourse.

B. Canada

Canadian legislation with respect to franchising boils down to the Alberta Act passed in 1972. Of course many provinces, including Ontario and Quebec, have tabled bills in this regard, but only Alberta currently has a legal framework governing the field of franchising.

The Franchises Act, in Albertan law, is administered by the Alberta Securities Commission. Preliminary observation already reveals that the first level of control, information, as applied by U.S. federal legislation, is not only covered but surpassed: this time, registration of the franchiser and the filing of information documents (the prospectus) are mandatory.

To register, the franchiser must first produce a prospectus that contains, at the very least, the information required by law. More than twenty categories of information must be disclosed and these closely resemble the Federal Trade Commission requirements. The registration of franchise brokers and the maintenance of a place of business in Alberta are just some of the requirements of this provincial law.

5.6.4 - Quebec: The Exception or the Rule?

A franchise contract governed by Common Law, and specific legislation respecting franchises that can be added to the contract, are two possible avenues for regulation in Quebec. One is general and indirect, the other sectorial and specific; one is limited to the parties involved, the other introduces other agents (the Securities Commission, for instance). Which will it be? Is standard contract law sufficient or, should the overall operations involved in the franchising relationship be standardized in further detail? Is Quebec's status so special that we must, like other governments, legislate the franchise sector specifically?

Arguments for additional legal support can be summarized as follows: re-establishing the balance between the unequal powers of the franchiser and the franchisee in order to ensure more protection from the franchisee. This adjustment would lead to a decrease, even the elimination, of fraud, of dishonest proposals, and abuses in the interpretation of contract clauses. Also, specific legislation on franchising, because of demands respecting the disclosure of information and other points, would have the advantage of shedding some light on the intentions of the future franchiser. These many and complex formalities would not represent a significant obstacle for serious investors.

Supporters of the other thesis, regarding the status quo so to speak, maintain that the way things currently work, the Common Law system applicable to contracts in general and the franchising agreement in particular has its own control mechanisms, namely the various forms of juridical recourse. Furthermore, given that the franchiser cannot succeed unless the franchisee also succeeds, it is in his best interests to demonstrate his good faith and maintain a climate of trust and mutual respect in both his cooperative and contractual relationships.

This discourse is not new to Quebec. For instance, in 1979, Bill 70 was passed to amend the Quebec Securities Act, and thus subject the franchise contract to the supervision and control of the Quebec Securities Commission. As a result, any future regulations would cover the field of franchising. In support of this process, the protection of the many small and medium-sized businesses currently engaged in or planning to engage in franchising agreements or concession agreements has been invoked[8]. The Albertan experience was then discussed to demonstrate the similarity of the situations in the two provinces, each of which has its own securities commission. Such efforts were shortlived: on the one hand, the bill was never ratified and the Revised Securities Act, which was passed in 1982, did not include this method of controlling franchises.

The existence of controls ensured by contract law, the existence of associations devoted to the development and protection of the groups and individuals involved in franchising, as well as current trends towards deregulation, all form a backdrop for the selection, or not, of another system of controlling franchises in Quebec.

5.7 - Conclusion

The growth rate of the franchise industry in the United States will range from 7% to 29% annually over the next few years, depending on the sector. These prospects, which can easily be transposed to Quebec, confirm that the leisure, construction, domestic services, retail trade, fast food and business services sectors will be among the most active sectors by 1990. Table 5.1 illustrates these projections.

Thus, the franchising industry still offers numerous possibilities, and given the size of most franchise establishments, it is without a doubt the industry for SMB. The industry has lived and prospered because it has enabled individuals with generally limited means to enter the field of business and to succeed.

---

[8] Assemblée nationale du Québec, Journal des débats, December 18, 1979, page 4713.

Table 5.1

Growth of the Franchise Industry
United States
1985 - 1990
(In thousands of dollars)

Sectors	Sales in 1985	Sales in 1990	Δ%
Restaurants	48,9	86,1	12,0
Retail stores (except food)	18,8	33,6	12,3
Hotels, motels and campgrounds	14,6	22,5	9,0
Convenience stores	12,3	19,4	9,5
Administration	12,1	21,3	12,0
Automobile	10,6	15,9	8,5
Food (except convenience stores)	10,4	15,9	7,0
Vehicle rentals	5,3	8,9	11,0
Construction and related services	3,7	92,5	20,0
Leisure, travel	1,8	6,6	29,0

Source: "The future of franchising: looking 25 years ahead to the year 2010". A study commissioned by the International Franchise Association and carried out by the Naisbitt Group, in Washington. Montreal, La Presse, Tuesday March 31, 1987.

Nevertheless, franchising, like business in general elsewhere, is not merely a story of success and prosperity. The number of franchises in existence today has grown to unexpected proportions and those that are developing, especially in the services sector, will significantly increase the number of franchisees. Franchises are not all of equal value, and this cannot unfortunately be determined in any rigorous fashion except on a specific and practical basis.

In any case, the success of a business depends very closely on the time and money that the franchisee is ready to invest. It is a mistake to think that franchising is a get-rich-quick scheme, as only a few exceptional cases have benefited from this opportunity. However, franchising is most certainly a formula for minimizing the risk of bankruptcy and, for many, is the best business opportunity around.

Chapter 6

The Penetration of Data Processing in Small and Medium-Sized Business in Quebec

In 1984 and 1985, in the course of preparing for the Conférence sur l'électronique et l'informatique, the Commission sur l'informatisation des entreprises et des administrations publiques attempted in vain to define the degree of penetration of computer technologies in Quebec business. The Commission was forced to conclude the following:

> The lack of statistical data on the computerization of business prevents us from determining with any precision the degree of penetration of new computer technologies. The Institut national de la productivité (INP), which the ministère de la Science et de la Technologie (MST) commissioned, in spring 1984, to describe the degree of penetration and speed of dissemination of data processing in the various economic sectors, encountered the same problems the Commission did, namely a glaring lack of statistical data on the computerization of Quebec businesses.
>
> The Commission can but underline and deplore the situation. The need for up-to-date information on the status of computerization in various sectors of Quebec's economy is of prime importance. This information should be designed to measure our lag behind major Canadian and international competitors, to identify our strengths and our weaknesses, and evaluate our specific needs[1].

The amount of available information has obviously improved since then, but it has yet to reach the level of quality desired by the Commission. Quebec does not yet have the systematic data it needs to assess the degree of computerization of business. It goes without saying that the quest for more detailed information, that will allow comparisons of the degree of computerization of companies according to size, is an even further restriction on the range of available sources. We are therefore forced to rely on general surveys or studies, or on inventories of particular sectors of economic activity.

This chapter will attempt to outline the principal data available on the computerization of small and medium-sized business (SMB) in Quebec. After we have defined what we mean by the computerization of business, we will successively discuss:

- the results of a survey comparing the degree of computerization in small, medium-sized and large companies in Quebec;

---

[1] Les Conférences socio-économiques du Québec, La Conférence sur l'électronique et l'informatique. Rapport de la Commission 2. L'informatisation des entreprises et des administrations publiques, Québec, February 1985, pp. 10 and 11.

- some of the results that will help define the degree of automation of Canadian and Quebec manufacturing sectors;
- the motives and obstacles to computerization; - a few comparisons with Ontario and with certain industrialized nations, that will help put the computerization of Quebec business in perspective.

6.1 - Definition of the Computerization of Business

Before we can even begin to discuss the current state of computerization of business, we must define what it means. We have therefore adopted the definitions selected by the Conférence sur l'électronique et l'informatique[2].

Computerization means the use of programmable hardware and software, in either management or production. We must therefore distinguish between two types of data processing:

- Management Data Processing, which pertains to the repetitive processing of masses of accounting or statistical data for purposes of decision-making, in the areas of finance, human resources, customer service, inventory control, etc;
- Industrial Data Processing, which pertains to industrial design and to control of the movements and rate of use of raw materials, namely to computer-controlled electromechanical manufacturing equipment.

Why this distinction? Because these types of data processing differ on a number of points: installation costs, nature of the installation problems, scope of the impact on employment, production and organization in the company. It should however be noted that vertical integration will eventually occur, along with increased interconnection between the management and production computers, and this will accelerate the transfer of production information to the management computers.

A distinction must also be drawn between the notions of computerization and modernization. Computerization includes data processing applications in management, design and production, whereas modernization is a broader concept that covers both the introduction of new computer technologies and the application of non-computer techniques to the production process. Computerization must be encouraged and developed wherever necessary. However, it is not the answer to all a company's headaches.

---

[2] Ibid., pp. 5 and 6.

Table 6.1 offers a few examples of the data processing technologies connected with management and production.

The next section will discuss the use Quebec business has made of the management, design and manufacturing applications made possible by these new technologies.

6.2 - The Computerization of Small, Medium-Sized and Large Companies in Quebec

To our knowledge, the most detailed and useful information on the computerization of business in Quebec is to be found in the research project carried out by three researchers at the Université du Québec à Montréal (UQUAM). The project is based on a survey con-

Table 6.1
Data Processing Applications in Business (partial list)

Management (office)	**Production (plant)**
Data processing connected with management	Data processing connected with design and manufacturing
– data processing – support for decision-making	– CAD/CAM graphics systems – digital control machine tools
– office automation – telematics – etc.	– flexible workshops – robots – control of continuous processes – etc.

Source: La Conférence sur l'électronique et l'informatique. Rapport de la Commission 2. L'informatisation des entreprises et des administrations publiques. Les Conférences socio-économiques du Québec, Quebec, February 1985.

ducted in June 1985, by means of a questionnaire administered to 1,949 Quebec businesses. The survey response rate was 44%, yielding a basic sample of 849 respondents. In a series of articles published in the magazine Gestion[3], the authors outlined the main results of the survey, by size of company and economic sector.

The UQAM researchers analyzed the percentage of companies with computer equipment, the applications, and current and projected computer equipment, in addition to the rate of computerization of Quebec business. Their findings are reviewed below.

6.2.1- Percentage of Companies with Computer Equipment

One of the first variables used to estimate the level of computerization of Quebec businesses is the percentage of companies that already own computer equipment. Table 6.2 presents this information according to size of company and economic sector.

The first point is that 80% of the companies that participated in the survey own computer equipment. However there are some major variances in this relatively high percentage, depending on the size of the company and the economic sector. These distinctions may be summarized as follows:

- the percentage of companies that own computer equipment increases along with the size of the company, regardless of the sector of economic activity;
- regardless of the size of the companies surveyed, firms in the manufacturing sector are less computerized than commercial businesses, and the latter are less computerized than the service companies.

Thus, only 42% of manufacturing companies with fewer than 20 employees have computer equipment, compared to 50% of commercial businesses and 68% of service companies of the same size. The computerization rates of the various economic sectors only become equivalent in companies with over 100 employees.

However, the situation can be expected to alter somewhat if the non-computerized companies go through with their plans to acquire computer equipment. Indeed, manufacturing companies with fewer then 100 employees have manifested a clear intention to acquire computer equipment. The variance between companies in the different economic sectors is therefore likely to decrease significantly in the coming years.

---

[3] LEFEBVRE, Louis-A , LEFEBVRE, Elizabeth and DUCHARME, Jean, "Les entreprises québécoises et l'informatique: situation actuelle et perspectives futures", Gestion, November 1985; "Le taux d'informatisation de la petite entreprise québécoise", Gestion, April 1986; "L'informatique dans la moyenne et la grande entreprise au Québec", Gestion, Sept. 1986.

Table 6.2
Percentage of Companies That Own Computer Equipment According to Size and Sector of Activity Quebec, 1985

Sector of Activity Size (number of employees)	Manufacturing	Trade	Services	Total
	%	%	%	%
1 to 19	42	50	68	60
20 to 49	56	75	95	75
50 to 99	77	95	93	85
100 to 249	93	87	93	92
250 to 499	97	100	100	98
500 and over	100	100	100	100
Total	73	76	85	80

Source: UQAM survey.

6.2.2 - Data Processing Applications in Quebec Businesses

While it may be interesting to discuss the percentage of companies that own computer equipment, this tells us little about the use they make of this equipment. Major applications that have already been implemented, as well as management's intentions regarding short-term introduction of new applications are presented in tables 6.3 and 6.4.

If we consider business as a whole, the most widespread data processing application, namely accounting and finance, is to be found in more than 70% of companies. Applications connected with word processing, personnel management (often associated by respondents with payroll management), operations management and inventory management were observed in respectively 49%, 43%, 40% and 34%

Table 6.3

Percentage of Companies That Have Already Introduced Data Processing Applications According to Type of Application, Company Size and Sector of Activity Quebec, 1985

Current Applications	Sector of Activity									
	Manufacturing			Trade			Services			Total
	Small %	Medium %	Large %	Small %	Medium %	Large %	Small %	Medium %	Large %	%
Accounting/Finance	59	92	93	66	86	100	64	94	89	71
Inventory Management	35	61	79	40	81	89	13	35	42	34
Personnel Management	36	71	82	23	67	89	30	60	76	43
Operations Management	24	53	82	37	38	78	33	56	70	40
CAD	..	9	43	..	–	–	..	14	15	3
CAM	..	15	43	..	–	–	..	1	4	6
Word Processing	24	45	86	25	33	69	60	76	83	49
Mail/Messaging	..	11	29	..	14	11	..	14	26	11
Archiving	..	9	14	..	5	11	..	15	26	10
Teleconferencing	..	2	21	..	5	–	..	8	13	4

.. : Data unavailable.

Note:
Small Companies:	1 to 99 employees
Medium-Sized Companies:	100 to 499 employees
Large Companies:	500 employees or more.

Source: UQAM survey.

Table 6.4

Percentage of Companies Planning to Introduce Data Processing Applications According to Type of Application, Company Size and Sector of Activity Quebec, 1985

Planned Applications	Sector of Activity									
	Manufacturing			Trade			Services			Total
	Small %	Medium %	Large %	Small %	Medium %	Large %	Small %	Medium %	Large %	%
Accounting/Finance	24	6	11	25	19	–	26	6	6	19
Inventory Management	32	31	25	32	19	11	12	11	25	22
Personnel Management	20	12	11	22	10	–	17	15	9	16
Operations Management	27	27	18	17	10	11	19	14	9	20
CAD	..	6	14	..	–	–	..	7	8	6
CAM	..	13	14	..	–	–	..	1	–	5
Word Processing	20	17	7	20	24	19	18	8	8	17
Mail/Messaging	..	9	25	..	9	33	..	31	28	12
Archiving	..	6	25	..	19	44	..	26	17	12
Teleconferencing	..	4	7	..	–	–	..	7	8	3

.. : Data unavailable.

Note:
Small Companies: 1 to 99 employees
Medium-Sized Companies: 100 to 499 employees
Large Companies: 500 employees or more.

Source: UQAM survey.

of companies. Other, more sophisticated, more specialized types of applications, that are not necessarily applicable to all types of businesses, were significantly less popular.

Now, if we analyze this data in terms of the size and the economic activity of companies, certain interesting details emerge. In general, the penetration rate of the various computer applications grows with the size of the business, but differs according to sector of activity:

- accounting/finance, personnel management and operations management applications present fairly similar profiles of use from one sector to another;
- medium-sized and large manufacturing companies have more use for CAD/ CAM technologies than do other sectors; on the other hand, computer-assisted design was observed in close to 15% of medium-sized and large service companies;
- word processing and other office automation applications are more frequently encountered in service companies than in other sectors of activity, especially among small and medium-sized businesses (SMB);
- inventory management software is used far more by manufacturing and commercial businesses than by service companies.

Introduction of new computer applications will occur mainly in small businesses, as large companies already have the equipment and software they need. Demand for new applications seems to be increasingly diversified. However, demand is most likely to increase for applications connected with operations management, inventory management, office automation and CAD-CAM.

6.2.3 - Current and Projected Investments in Computer Equipment

Another indicator of the importance that business assigns the data processing function is the value of the existing or projected computer equipment in companies. Table 6.5 illustrates the average value of existing or projected computer equipment, according to size and economic activity of Quebec businesses.

As with other variables analyzed previously, the value of the computer equipment already purchased increases with the size of the business, regardless of the sector of activity. Two interesting characteristics emerge from the statistics presented:

- the first observation is that the phenomenon of computerization of companies is far from over: regardless of the size and the sector of activity of the companies, the latter plan to continue acquiring computer equipment in the short term;

Table 6.5

Average Value of Existing and Planned Computer Equipment[1]
According to Company Size and Sector of Activity
Quebec, 1985

	Sector of Activity					
	Manufacturing		Trade		Services	
Size	Actual $	Projected $	Actual $	Projected $	Actual $	Projected $
1 to 19 employees	94 762	16 429	37 000	23 888	31 649	15 666
20 to 49 employees	84 216	55 568	60 625	30 833	111 567	42 200
50 to 99 employees	80 789	36 000	235 789	95 000	188 777	76 000
100 to 499 employees	217 640	201 860	338 240	366 370	334 170	260 510
500 employees or more	609 380	423 610	700 000	700 000	496 670	432 030

1. Including hardware and software.
Source: UQAM survey.

- average investments were also observed to be relatively high for very small businesses in the manufacturing sector; this can be attributed to the high cost of computer-assisted manufacturing technologies.

While the projected purchases discussed here are estimates and may not necessarily take place, they nonetheless underline the importance that owners/managers of companies have assigned to the computerization of their activities. A survey carried out by the ministère de l'Industrie et du Commerce (MIC)[4] tends to confirm the results of the UQAM study.

This survey estimates that, based on the companies' purchasing plans, over 170 million dollars would be spent on computer equipment in Quebec in 1987, with most of this sum stemming from small and medium-sized companies. Such investments can have a substantial impact not only on the company, but on the general economy.

6.2.4 - Computerization Rate of Quebec Companies

The UQAM researchers selected a relatively simple measure to determine the computerization rate of companies: it consists in determining the number of computer applications introduced in each company. Computerization rates according to size of company and economic sector are presented in Table 6.6.

The lowest computerization rate observed was in small companies in the manufacturing and commercial sectors, where respectively 62% and 64% of businesses have little or no data processing capability. This slowness could be related to the availability of the human resources needed to computerize these companies, as well as to the cost involved in both sectors. Furthermore, the specific nature of the activities of many companies in these sectors means that it is often difficult and costly to automate their operations or functions.

The small businesses in the services sector have shown more obvious signs of integrating data processing than other sectors, with 50% of companies declaring that they use more than three data processing applications. This situation can be attributed to the fact that the functions of these companies are more closely connected with information processing.

This completes our brief review of the status of computerization of Quebec business. Although the data presented was taken from a survey of a limited number of companies, the fact remains that these statistics are a fairly clear indication that grey areas do exist in the penetration of data processing in busi-

---

[4] COTÉ, Denis and CHOUINARD, Martin, La demande de logiciels au Québec, Service du logiciel et des équipements bureautiques et informatiques, MIC, March 1987.

Table 6.6
Rate of Computerization[1] of Companies, According to Size and Sector of Activity Quebec, 1985

	Size[2]		
	Small %	Medium %	Large %
Manufacturing Companies			
Not computerized	34	5	–
Slighty computerized	28	18	11
Moderately computerized	27	49	14
Highly computerized	12	28	75
Commercial Firms			
Not computerized	26	6	–
Slighty computerized	38	23	11
Moderately computerized	23	65	22
Highly computerized	14	6	67
Service companies			
Not computerized	18	3	–
Slighty computerized	33	19	10
Moderately computerized	39	43	29
Highly computerized	11	35	62

1. The Computerized rate of companies is measured by the number of applications used.
   - not computerized: has no application
   - slighty computerized: has 1 or 2 applications
   - moderately computerized: has 3 or 4 applications
   - highly computerized: has 5 or more applications.

2. Small companies: 1 to 99 employees
   Medium-Sized companies: 100 to 499 employees
   Large companies: 500 employees or more.

Source: UQAM survey.

ness. Subsequent research will however be required in order to identify the factors that will facilitate integration of data processing applications into the functioning of a business.

6.3 - Computerization of the Manufacturing Sector: Industrial Automation

In the preceding section, we analyzed the penetration of data processing applications in all companies. However, many of these applications occur indiscriminately in all sectors of economic activity. These can range from accounting and finance, to management, to word processing and other office automation applications.

When these horizontal types of applications are introduced to commercial or service companies, they have a direct impact on the companies' operations. However, in the case of the manufacturing sector, these same applications often only impact the management function of the company, while the production function as such remains untouched. In manufacturing companies, while management data processing is very important, industrial data processing applications can have the most impact on productivity increases.

Unfortunately, data on industrial automation is rare and is not necessarily available by size of company, or even for Quebec. We will therefore begin by reviewing the existing data on computerization in the manufacturing sector in Quebec, following it up with detailed results on the automation of the machinery and metalworking sector in Quebec. In fact, the latter is recognized as one of the major consumers of the new industrial data processing technologies.

6.3.1 - Industrial Automation in Canada

The Economic Council of Canada (CEC) recently conducted a survey[5], of the same type as the one conducted by UQAM, of some 1,000 Canadian companies in major sectors of economic activity. The establishments surveyed reported a total of 1,948 technological changes connected with data processing for the 1980-1985 period (the nature of the changes is described in Table 6.7).

In almost two-thirds of these cases, the innovations were connected with office automation. Another 23% of cases related to the automation of processes, principally computer-assisted design (CAD) and computer-assisted manufacturing (CAM) projects. Most of the other cases involved applications

---

[5] BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology – A Survey of Automation in Canada, Economic Council of Canada, 1986.

Table 6.7
Technological Applications, Current and Projected
By All Types of Businesses
Canada, 1986

	Current (1980-1985)	Projected (1986-1990)
	(in percentage of total applications)	
1- Automation of processes	**22.9**	**33.5**
Automated Handling Systems	3.1	4.1
Computerized Digital Controls (CDC)	3.1	3.2
Computer-Assisted Manufacturing (CAM)	9.2	14.3
Computer-Assisted Design (CAD)	5.1	8.4
Automated Inspection and Quality Control	2.4	3.5
2- Office Automation	**64.0**	**50.6**
Word Processing	17.3	9.3
Personal Computers/ Work Stations	25.3	15.4
Office Automation Networks	4.5	9.9
Other Applications	16.9	16.0
3- Other Automation Projects	**13.2**	**16.0**
Transport, communications, and other public services (specific applications)	1.7	1.5
Health Services (specific applications)	2.0	3.0
Computerized Points of Sale	4.7	5.7
Other Applications	4.8	5.8
Total	**100.0**	**100.0**

Source: BETCHERMAN, Gordon and McMULEEN, Kathryn, Working with Technology – A Survey of Automation in Canada, Economic Council of Canada, 1986.

adapted specifically to the needs of companies, notably in the services sector.

However, this trend is expected to evolve over the 1986-1990 period. Office automation will remain the main form of technological innovation, but it is anticipated that process automation projects will take on increasing importance, growing from 23% to close to 34% of the projected applications in the establishments surveyed.

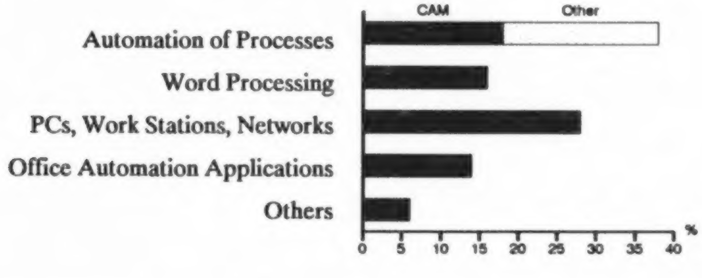
How has the introduction of new data processing technologies manifested itself in the manufacturing sector? Graph 6.1 outlines the nature of the data processing applications introduced by manufacturing companies between 1980 and 1985.

Process automation projects – CAD-CAM, computerized digital controls, equipment handling systems and quality control systems – are naturally more concentrated in the manufacturing sector. However, most of the innovations introduced to the manufacturing sector between 1980 and 1985 were in the field of office automation (56%) rather than process automation (37%).

Nevertheless, differences have been observed among the industries in this sector, in terms of the technologies introduced; these are reflected in Table 6.8. In the rubber and plastic products industry, half of the innovations concerned process automation techniques, which is a much higher percentage than the average 37% generally observed in

Graph 6.1

Technological Applications Introduced in the Manufacturing Sector Canada, 1980-1985



Source: BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology – A Survey of Automation in Canada, Economic Council of Canada, 1986.

Table 6.8
Introduction of New Data Processing Technologies, by Manufacturing Industry Canada, 1980-1985

	Technologies				
	Automation of Processes	**Word Processing**	**PCs, Work-, Stations, Networks**	**Office Automation**	**Other**
	(in percentage of total applications introduced in each industry)				
Food, Beverages and Tobacco	28	12	27	22	11
Rubber and Plastic Products	49	19	23	4	5
Leather, Textiles and Clothing	44	8	18	28	2
Wood and Furniture	39	11	23	22	5
Paper	43	12	27	11	7
Printing and Publishing	11	20	28	14	27
Primary Processing of Metals	41	10	38	4	7
Manufacturing of Metal Products	47	13	25	11	4
Manufacturing of Machinery	46	18	27	9	–
Manufacturing of Transportation	40	12	28	15	5
Electrical and Electronic Products	39	17	29	10	5
Chemical Products	27	22	34	13	4

Source: BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology – A Survey of Automation in Canada, Economic Council of Canada, 1986.

the manufacturing sector. The other industries in which automation projects played an important role include metal products, machinery, primary processing of metals, transportation equipment, paper, leather, textiles and clothing. The CEC analysis also reveals that, among the process automation techniques inventoried,

- CAM occurs mainly in the leather, textiles and clothing industries, in the rubber and plastic products industries, as well as in the primary metals and paper sectors;
- computerized digital controls have only been introduced on a large scale in the metal products and machinery sectors;
- CAD is essentially used in the electrical and electronic product manufacturing industries.

In fact, one of the major factors why, in the manufacturing sector, the penetration of process automation has been poorer than office automation is the high cost of the investments required. The expense of automating processes, especially with computerized digital controls (CDC) and computer-assisted manufacturing facilities, has far exceeded the sums devoted to office automation shown in Graph 6.2.

For instance, 50% of CDC applications each entailed at least $400,000 in disbursements, whereas the median cost of investments in word processing machines was only $20,000. Given that the proportion of process automation projects is expected to increase significantly between 1986 and 1990, it is likely that the scope of the technological changes in the labour sector will continue to grow.

Finally, it might be worthwhile to examine the manufacturing industries that proved the most innovative between 1980 and 1985 (see Graph 6.3). The data reveals the percentage of companies in each sector that have introduced technological changes connected with data processing in recent years. Even though this data does not take the type of innovation into account, or the costs inherent in these changes, they nevertheless represent an indication of the industry's openness to computerization.

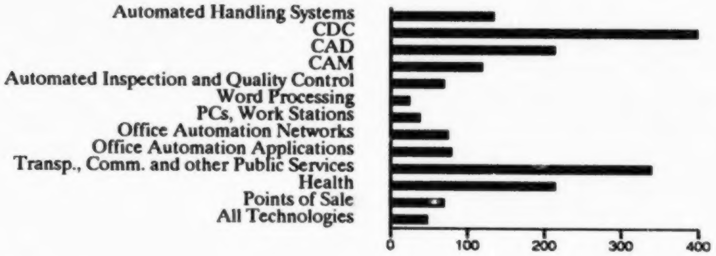
While approximately 75% of the companies in the overall manufacturing sector have introduced innovations, six industries reported percentages in excess of 80%:

- printing and publishing;
- metal products manufacturing;
- machinery manufacturing;
- transportation equipment;
- electrical and electronic products;
- chemical products.

According to the Economic Council of Canada survey, the printing and publishing and chemical products sec-

Graph 6.2

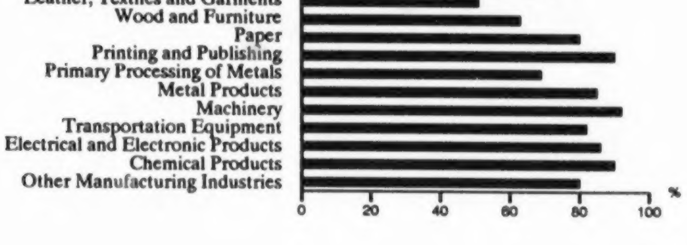
**Median Expenditures per Type of Innovation
Canada, 1980-1985
(in thousands of dollars)**



Source: BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology – A Survey of Automation in Canada, Economic Council of Canada, 1986.

Graph 6.3

**Percentage of Establishments Reporting Technological Changes Connected with Data Processing, per Manufacturing Industry
Canada, 1980-1985**



Source: BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology – A Survey of Automation in Canada, Economic Council of Canada, 1986.

tors, during the reference period, mainly introduced technological changes connected with various office automation applications. On the other hand, the other four sectors, namely metal products and machinery, transportation equipment, and electrical and electronic products, are the principal consumers of the most widespread process automation techniques, namely the CAD-CAM techniques, computerized digital controls and, robotics. We are now going to analyze in greater detail the penetration of technological change in these four economic sectors of Quebec.

6.3.2 - Automation of the Machinery and Metalworking Sector in Quebec

Most new technologies connected with industrial automation, such as digital controls, robotics and computer-assisted design and manufacturing, find most of their applications in companies working with metal. In 1985, the ministère de l'Industrie et du Commerce (MIC) of Quebec took stock of the production equipment in companies working with metal, and this gave rise to a research report[6] which analyzed the use of new technologies by companies in the sector.

For the purposes of the study, the machinery and metalworking sector encompasses four main groups in the manufacturing sector, namely manufacturers of metal products, machinery, transportation equipment and electrical and electronic products. The MIC survey reached 746 companies engaged in metalworking activities, 97% of whom belong to one of these four main groups. Over 80% of the respondents were metal products or machinery manufacturers, major groups comprised of mostly small and medium-sized companies. Finally, it should be noted that the inventory accounted for respectively 83% and 72% of the total employment in the machinery and metal products manufacturing firms listed with Statistics Canada, thus conferring excellent credibility on the MIC survey.

6.3.2.1 - Penetration of Data Processing Technologies in Sector Businesses

The answers to some of the questions that companies have been asked in the context of this inventory offer some clarification as to their use of management data processing, industrial data processing, computer-assisted design and digital control machine tools.

Thus, 41% of the companies inventoried use management data processing, but only 18% of the companies use industrial data processing. Data detailed according to the size of the companies and their main sector of activity appears in Table 6.9. As was to be expected, the percentage of companies that use data processing in their management or production increases

---

[6] Ministère de l'Industrie et du Commerce, Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, DGRP, MIC, August 1987.

Table 6.9

Machinery and Metalworking Sector
Use of Data Processing in Business Management and Production
According to Size and Major Group
Quebec, 1985

	1 to 19 Employees	20 to 99 Employees	100 to 499 Employees	Total
	%	%	%	%
Management Data Processing				
Group 30: Metal Product Manufacturers	13 (1)	51	84	36
Group 31: Machinery Industry	18	59	96	50
Group 32: Transportation Equipment Industry	3	42	100	30
Group 33: Electrical and Electronic Products	–	–	–	57
Other Major Groups	–	–	–	67
All Companies	13	53	88	41
Industrial Data Processing				
Group 30: Metal Product Manufacturers	4	20	34	13
Group 31: Machinery Industry	7	25	52	21
Group 32: Transportation Equipment Industry	3	18	57	13
Group 33: Electrical and Electronic Products	–	–	–	21
Other Major Groups	–	–	–	38
All Companies	4	21	44	18

1. The table should be read as follows: 13% of the companies in Group 30 with fewer than 20 employees use data processing in management.

Source: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

considerably with the size of the company. It should also be noted that the use of data processing seems to be more frequent among manufacturers of machinery than among manufacturers of metal products.

Furthermore, it is interesting to note, as shown in Table 6.10, that over 90% of the companies that have computerized a production-related function have also computerized their management. In fact, computerization of management generally precedes the computerization of production, and it is rather rare to encounter companies that only use data processing at the production level.

The survey questionnaire did not include any questions on CAD equipment per se. Nevertheless, the questionnaire did ask the companies how many people were assigned to CAD. The assumption is therefore that the companies that answered this question actually have CAD equipment.

Table 6.10
Machinery and Metalworking Sector
Use of Data Processing in Business Management and/or Production
By Major Group
Quebec, 1985

		Management Data Processing	Industrial Data Processing	Management and Industrial Data Processing
Group 30:	Metal Products Manufacturing	23% (1)	2%	13%
Group 31:	Machinery Industry	29%	3%	21%
Group 32:	Transportation Equipment Industry	21%	2%	12%
Group 33:	Electrical and Electronic Products	13%	4%	17%

1. The table should be read as follows: 23% of the companies in Group 30 use data processing in management only.

Source: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

Thus, 7% of the metal products manufacturers, 11% of the machinery manufacturers, 7% of the transportation equipment manufacturers, and 17% of the electrical and electronic products manufacturers surveyed use CAD technology.

6.3.2.2 - Distribution of Digital Control Machine Tools in the Sector

With respect to digital control machine tools (DCMT), the MIC inventory reported 787 DCMT, distributed among 161 Quebec companies. Table 6.11 presents a breakdown of DCMT per sector of economic activity. In 1985, metal products manufacturers, especially small and medium-sized companies, owned 42% of the DCMT in Quebec, as opposed to 29% in the

Table 6.11
Machinery and Metalworking Sector
Distribution of Digital Control Machine Tools
By Economic Sector
Quebec, 1985

		Companies		**DCMT**	
		Number	**%**	**Number**	**%**
Group 30:	Metal Products Manufacturing	83	51.6	329	41.8
Group 31:	Machinery Industry	41	25.5	135	17.2
Group 32:	Transportation Equipment Industry	20	12.4	225	28.6
Group 33:	Electrical and Electronic Products	11	6.8	55	7.0
Other major groups		6	3.7	43	5.4
Total		161	100.0	787	100.0

Source: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

transportation equipment industry and 17% in the machinery industry. However, the situation has altered significantly since 1974; back then, transportation equipment manufacturers owned over 40% of the DCMT in Quebec while metal products manufacturers owned only 26%.

75% of the companies identified as owning digitally controlled machines were Quebec-owned, but the latter own only 53% of the DCMT. The American-owned companies represent less than 10% of these companies, yet they own 24% of the digital control machine-tools (Table 6.12). Thus, the Quebec-owned companies have fewer digital control machine-tools than foreign-owned companies do. Two factors can explain this situation. On the one hand, large companies in the transportation equipment sector are mostly owned by interests from outside Quebec. On the other, foreign ownership increases with the size of the company.

These two factors imply a relationship between the size of the company and the use of digital control machine-tools. This relationship is illustrated by the data in Table 6.13, which presents the breakdown of DCMT according to size of business and membership in the major categories inventoried during the

Table 6.12
Machinery and Metalworking Sector
Distribution of Digital Control Machine Tools
According to Ownership of Companies
Quebec, 1985

Ownership	Companies		DCMT		Number of DCMT/ Number of companies
	Number	%	Number	%	
Quebec	123	76.4	417	53.0	3.4
Canada	21	13.0	150	19.0	7.1
États-Unis	13	8.1	189	24.0	14.5
Autres	4	2.5	31	4.0	7.8
Total	161	100.0	787	100.0	4.9

Source: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

Table 6.13
Machinery and Metalworking Sector
Distribution of Digital Control Machine Tools
According to Size of Business and Major Group
Quebec, 1985

Size of Business	Group 30 Metal Product Manufacturers		Group 31 Machinery Industry		Group 32 Transportation Equipment Ind.		Group 33 Electrical and Electronic Prod.		Total Groups 30-31-32-33	
	Number of DCMT	%	Number of DCMT	%	Number of DCMT	%	Number of DCMT	%	Number of DCMT	%
1 to 19 employees (very small)	46	14	8	6	1	–	–	–	55	8
20 to 99 employees (small)	178	54	47	35	36	16	9	16	270	36
100 to 499 employees (medium-sized)	75	23	33	24	32	14	18	33	158	21
500 employees or more (large)	30	9	47	35	156	70	28	51	261	35
Total	329	100	135	100	225	100	55	100	744	100

Source: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

survey. Based on this table, the following assertions can be made:

- whereas DCMT, just a few years ago, were the province of companies of a certain size, small and very small companies (fewer than 100 employees) now own 44% of the DCMT in Quebec;
- 70% of the DCMT used by transportation equipment manufacturers are owned by large companies (50% where large electrical and electronic product manufacturers are concerned);
- yet, where manufacturers of metal products and machinery are concerned, small and very small companies control respectively 68% and 41% of the DCMT used by the companies in these two major groups.

These assertions are likely to clarify certain points raised in the preceding paragraphs. For instance, it is easier to understand why manufacturers of metal products today use close to 42% of the DCMT in Quebec: this major group, which is comprised mainly of small businesses, delayed equipping itself with DCMT, compared to the other major groups whose large companies had made their acquisitions much earlier. Moreover, Table 6.13 offers partial confirmation of the assumptions advanced earlier to explain the higher proportion of automation in foreign-owned companies.

Nevertheless, in order to complete the analysis, it might be interesting to examine the concentration of digital control machine-tools in companies that already have DCMT. Table 6.14 classifies the 161 companies owning DCMT by the number of DCMT in use and the size of the companies. For instance, the following was noted:

- the average number of DCMT per company increases with the size of the companies: small companies own on average between 1 and 4 DCMT, whereas large companies own an average of 15;
- 34% of the DCMT are concentrated in large companies, which represent only 12% of the target population;
- the companies that use a minimum of 6 DCMT (24% of the companies examined) own 69% of the digital control machines in Quebec.

A concentration of DCMT has therefore been observed in the companies that already own them, especially large companies. Table 6.15 illustrates the concentration of the DCMT fleet according to sector of economic activity. Most noteworthy is the fact that:

- the concentration of DCMT is far higher among the transpor-

Table 6.14
Machinery and Metalworking Sector
Concentration of Digital Control Machine Tool Fleet
According to Size of Business
Quebec, 1985

Firms owning:	Size of Business									
	Very small (1 to 19 employees)		Small (20 to 99 employees)		Medium-Sized (100 to 499employees)		Large (500 employees +)		Total	
	Number Firms	Number DCMT	Number Firms	Number DCMT	Number Firms	Number DCMT	Number Firms	Number DCMT	Number Firms	Number DCMT
1 or 2 DCMT	24	29	50	66	12	18	4	5	90	118
3, 4 or 5 DCMT	6	20	16	60	9	37	1	5	32	122
6 to 10 DCMT	1	6	10	79	9	85	5	44	25	214
11 DCMT or more	–	–	3	76	3	38	8	219	14	333
Total	31	55	79	281	33	178	18	273	161	787
Percentage	19%	7%	49%	36%	20%	23%	12%	34%	100%	100%
Average number of DCMT per firm, according to size	1.77		3.56		5.39		15.17			

Source: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

Table 6.15

Machinery and Metalworking Sector
Concentration of Digital Control Machine Tool Fleet
According to Economic Sector
Quebec, 1985

Companies owning:	Group 30 Metal Product Manufacturers		Group 31 Machinery Industry		Group 32 Transportation Equipment Industry		Total Groups 30-31-32	
	Number	DCMT	Number	DCMT	Number	DCMT	Number	DCMT
1 or 2 DCMT	47	61	28	40	7	8	82	109
3, 4 or 5 DCMT	15	53	6	20	4	16	25	89
6 to 10 DCMT	16	120	5	40	3	27	24	187
11 DCMT or more	4	95	2	35	6	174	12	304
Total	82	329	41	135	20	225	143	689
Percentage	57%	47%	29%	20%	14%	33%	100%	100%
Average of DCMT Per company	4.01		3.29		11.25			

Source: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

  tation equipment industry, which owns an average of 11 DCMT per company as opposed to 4 among manufacturers of metal products and 3 among machinery manufacturers;

- in fact, 6 large transportation equipment manufacturers own 25% of the DCMT fleet, which would tend to confirm the hypothesis advanced earlier regarding the high degree of automation of foreign-owned companies.

Thus, digital control machine-tools have always occurred in large foreign-owned companies. However, in the last decade, DCMT have continued to penetrate small business and even very small business in Quebec, especially among manufacturers of metal products and machinery.

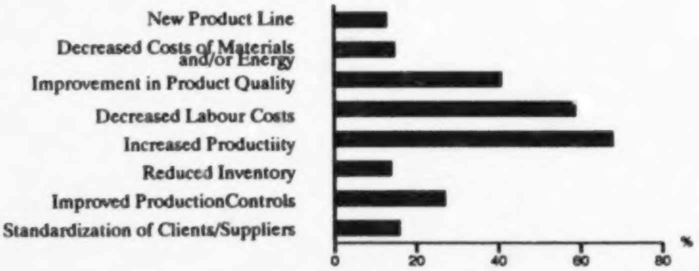
6.4 - Incentive and Obstacles to the Automation of Business

We will now briefly discuss the factors that can forward or hinder the computerization process of a business, including some of the results that can be achieved through automation.

6.4.1 - Grounds for Innovation

Increased productivity has been mentioned as a reason for change in two thirds of the innovation cases reported by participants in the Canadian Economic Council survey. Among the other factors mentioned, albeit less frequently, was a decrease in labour costs and an increase in product quality (see Graph 6.4).

Graph 6.4
Grounds for Innovation in Percentage of Total Innovation Projects Canada, 1980-1985



Source: BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology — A Survey of Automation in Canada, Economic Council of Canada, 1986.

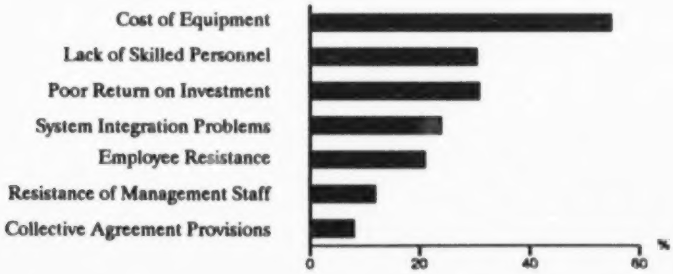
The reasons that inspired the participating establishments to innovate vary according to the type of technology. Office automation techniques are mostly introduced for reasons of productivity. On the other hand, process automation projects seem to be motivated by more complex factors. Of course, considerations of productivity come into play here as well, but other encouraging elements have also been reported. The reduction of labour costs proved especially significant when it came to introducing digital control systems and automated handling systems. An improvement in product quality was the source of most innovations connected with automated inspection, CDCs, CAD and CAM. CAM techniques and automated handling systems are often introduced in order to increase production controls.

Improvements in product quality, increased productivity and decreased labour costs are the major factors that have inspired establishments in the health services sector and in the transportation and communications sectors to introduce technological applications specific to their field of activity.

Finally, terminals have been introducted at points of sale in response to the imperatives of productivity and, to a lesser extent, to a need for standardization between suppliers and customers; the need to reduce inventory has also played a role in the latter case.

Graph 6.5

Obstacles to Innovation
Percentage of Establishments Reporting Obstacles
Canada, 1980-1985



Source: BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology – A Survey of Automation in Canada, Economic Council of Canada, 1986.

6.4.2 - Obstacles to Innovation

Slightly over half of the establishments questioned during the CEC survey (see Graph 6.5) mentioned that the cost of equipment was an obstacle to the introduction of new technologies. This result supports the argument that cost is one of the reasons for the relatively poor role assigned costly technologies in recent innovation projects.

After the cost of equipment, the lack of qualified staff, and the uncertain or poor return on investment were mentioned most often as obstacles to technological change.

It is noteworthy that the survey offers little data in support of the thesis occasionally advanced that the resistance manifested by workers and management staff represents an obstruction to innovation. The fairly widespread opinion that the restrictive provisions contained in collective agreements are another barrier to automation was not borne out by the survey results either.

6.4.3 - Some Results of Automation

The MIC inventory of companies in the machinery and metalworking sector has connected automation to certain variables in the operating of companies. For instance, an automated firm generally has more than one work shift a day, which ensures it a larger production capacity than a non-automated firm. What is more, it seems to be more open to exporting than the non-automated firm. A recent Ontario study[7] in fact revealed that the percentage of companies that export their products is clearly higher among companies that use digital control than among those that do not (Table 6.16). Finally, the automated metalworking company in Quebec has far more qualified staff in its employ and is more closely concerned with the certification and quality control of its products.

All of these factors indicate that non-computerized companies are having increasing difficulty qualifying as sub-contractors to large companies. When the ones giving orders are large companies, the technical specifications for the subcontract work are transmitted with increasing frequency via computer and the subcontracting company is asked to design the part itself on CAD equipment. What is more, the growing trend in large companies is to keep their parts inventory to a minimum: they prefer to order according to need, which leaves subcontractors with very short turnaround times that, apparently, can only be handled with industrial data processing equipment. Thus, companies planning to maximize their subcontracting opportunities should think seriously about automating their production process.

---

[7] Ontario Ministry of Industry, Trade and Technology, The Market for Flexible Automation Equipment in Ontario, Innovation and Technology Division, Novembre 1985.

Table 6.16

Machinery and Metalworking Sector
According to Whether Digital Control Machine Tools Are Used or Not
Ontario, 1984

Sectors of activity		Penetration Rate of DCMT (%)	Export Ratio Users	Export Ratio Non-Users
30.	Metal Products Manufacturing	7.3	61.7	34.9
31.	Machinery Industry	15.4	67.9	44.9
32.	Transportation Equipment Industry			
	– automobiles and parts	7.8	82.3	57.0
	– aerospace industry	39.8	66.7	60.9
33.	Electrical and Electronic Products	4.8	78.6	45.4

Notes: – Penetration rate of DCMT: number of companies with at least one DCMT/number of companies in economic sector x 100..
– Export ratio: number of companies exporting/number of companies in that economic sector x 100.

Source: The Market for Flexible Automation Equipment in Ontario. Ontario Ministry of Industry, Trade and Technology, Innovation and Technology Division, November, 1985.

6.5 - A Few Comparisons with International Markets

Where does Quebec stand with respect to computerization of business compared to the rest of Canada? What is Canada's relative position regarding this issue, compared with the major industrialized countries? There is no easy answer to these questions. On the one hand, studies on the computerization of business are not published very frequently, and data gathered in two different locations, according to the same methodology, is rather rare. Furthermore, any comparison between two provinces or two countries must take into account the industrial structures of these provinces or countries. Such comparisons involve major difficulties.

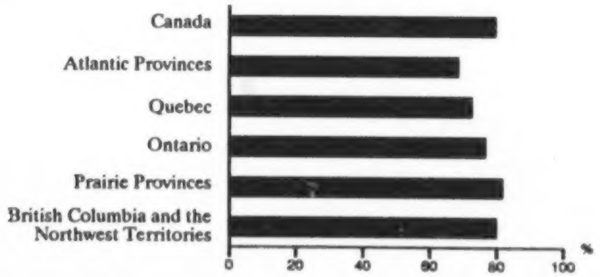
In spite of these limitations, we will attempt, using the data available, to compare the penetration of data processing in general, and of digital control machine tools and robotics in the companies of Quebec and Canada.

6.5.1 - Computerization of Business

The utility of foreign data regarding the computerization rate of companies abroad is limited, because definitions of technology and reference years tend to vary from one country to the next. To our knowledge, there is no comparable survey to the one conducted by UQAM that would enable us to compare the computerization of business in Quebec to that of business in Ontario or Canada.

However, the study conducted by the Canadian Economic Council contains an estimate by region of the percentage of establishments that reported technological changes connected with data processing between 1980 and 1985. The data is presented in Graph 6.6. In light of this data, 71% of the Quebec businesses surveyed had introduced technological innovations, which is a significantly lower percentage than that reported by Ontario businesses (77%). The western provinces report rates above the national average, whereas the Maritime provinces reported the lowest rates. In the opinion of the CEC, these results to a certain extent reflect the regional distribution of industrial activity in Canada. For instance, a high technology sector such as commercial services is more likely to be located in Ontario or in the western provinces than it is in the Atlantic provinces.

Graph 6.6
Regional Scope of Innovations
Percentage of Establishments Reporting Technological Changes Connected with Data Processing
Canada, 1980-1985



Source: BETCHERMAN, Gordon and McMULLEN, Kathryn, Working with Technology — A Survey of Automation in Canada, Economic Council of Canada, 1986.

6.5.2 - Penetration of Digital Control Machine Tools (DCMT) in Quebec and Canada

6.5.2.1 - Growth of the Canadian Fleet of DCMT Since 1974

The Canadian fleet of digital control machine tools has grown at a rate of 21.5% a year since 1974. Table 6.17 shows the changing numbers and growth rate for DCMT in Canada, Ontario and Quebec, since 1974.

Approximately 64% of Canadian DCMT were located in Ontario in 1984. Ontario's share, which had maintained itself at around 60% throughout the 70s, has therefore grown slightly since the early 80s. Quebec's relative share of the market was approximately 22% of the Canadian DCMT in 1984. Yet, if we use the age of the DCMT as an approximation of their year of installation, we may conclude that, towards 1975, the Quebec fleet represented between 30% and 35% of the Canadian fleet of DCMT.

Based on this approximation, the fleet of DCMT in Quebec appears to have grown at a rate of 15.5% per year since 1974, whereas the growth rate of the Ontario fleet has been in the order of 22.6% per year. The gap between the growth rates of the two provinces has widened since 1981; in fact, the Ontario growth rate has been double Quebec's growth rate for three of the last four years.

Thus, Quebec's relative share of the Canadian digital control machine tool fleet is smaller than Ontario's share and the gap between the two provinces has grown since 1981. However, the Canadian fleet of digital control machine tools is itself considered very small by international standards. For instance, the above-mentioned study conducted by the Ontario Government establishes a ratio between the number of digital control machine tools and the total number of machine tools purchased in 1983 for certain industrialized nations. The results are as follows[8]:

– Japan	38.1%
– United States	12.9%
– United Kingdom	8.1%
– Canada	4.4%

A recent analysis by two professors at York University[9] confirms Canada's lag in this field. Data presented in Table 6.18, this time on the fleet of machine tools in use, reveals that Canada ranks last among the six industrialized nations analyzed with respect to percentage of digital control machine tools in use.

---

[8] Ibid p. 9.

[9] LITVAK, I.A. and WARNER, T.N. "Multinationals, Advanced Manufacturing Technologies, and Canadian Public Policy", Business Quarterly, Summer, 1987.

Table 6.17
Digital Control Machine Tools
Growth of DCMT Fleet
Canada, Ontario, Quebec
1974-84

Year	Canada[1]		Ontario[1]		Quebec[2]	
	Number of DCMT	Growth Rate (%)	Number of DCMT	Growth Rate (%)	Number of DCMT	Growth Rate (%)
Prior to 1974	386	–	235	–	151	–
1974	492	27.5	287	22.1	178	17.9
1975	612	24.4	364	26.8	210	18.0
1976	737	20.4	445	22.3	227	8.1
1977	875	18.7	536	20.4	255	12.3
1978	1 040	18.9	650	21.3	313	22.7
1979	1 361	30.9	831	27.8	369	17.9
1980	1 828	34.3	1 108	33.3	497	34.7
1981	2 347	28.4	1 430	29.1	566	13.9
1982	2 661	13.4	1 642	14.8	641	13.3
1983	3 026	13.7	1 908	16.2	695	8.4
1984	3 457	14.2	2 209	15.8	755	8.6
Annual Growth Rate 1974-1984	21.5%		22.6%		15.5%	

Sources: 1. The Market for Flexible Automation Equipment, Ontario Ministry of Industry, Trade and Technology, Innovation and Technology Division, November 1985.

2. Enquête sur les équipements de production de l'industrie québécoise du travail du métal, Direction des biens d'équipement, MIC.

Excerpted from: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

Table 6.18
Use of Digital Control Machine Tools
Major Industrialized Nations

	Digital Control Machine Tools	All Machine Tools	%
Canada	3 000	211 000	1.4
France	19 000	761 000	2.1
Japan	51 000	918 000	5.5
United Kingdom	17 000	775 000	2.1
United States	103 000	2 193 000	4.7
West Germany	29 000	1 250 000	2.3

Source:Litvak, I.A., et T.N. Warner, "Multinationals, Advanced Manufacturing Technologies, and Canadian Public Policy", Business Quarterly, Summer, 1987.

6.5.2.2 - Breakdown of DCMT According to Sector of Activity and Size of Company

There are other comparisons outlining the differences in use of digital control machine tools in Ontario and Quebec. For instance, the distribution of the DCMT fleet according to sector of economic activity differs in Ontario and Quebec, as Table 6.19 reveals. The following differences have been observed between the two provinces:

- in Ontario, most DCMT occur in the machinery sector (39.3%), whereas in Quebec, the dominant sector is metal product manufacturing (41.2%);
- In Quebec, the metal product manufacturers increased their share of the DCMT fleet considerably between 1974 and 1984, to the detriment of the machinery and transportation equipment industries; the same situation prevails in Ontario, but with much less intensity;
- The percentage of companies with at least one DCMT is higher in Ontario than it is in Quebec, in all sectors of

Table 6.19
Digital Control Machine Tools
Distribution of DCMT Fleet and Rate of Penetration of DCMT
By Economic Sector
Ontario and Quebec, 1974 and 1984
In Percentage

Economic Sector	Ontario[1]			Quebec[2]		
	1974	1984	Penetration Rate of DCMT 1984	1974	1984	Penetration Rate of DCMT 1984
30- Metal Product Manufacturing	20.0	27.1	7.3	25.8	41.2	7.0
31- Machinery Industry	41.8	39.3	15.4	23.0	16.8	12.2
32- Transportation Equipment Industry	-	-	-	40.4	29.3	7.5
— automobiles and parts	3.6	6.1	7.8	-	-	-
— aerospace industry	9.5	5.7	39.8	-	-	-
33- Electrical and Electronic Products	11.6	8.6	4.8	8.4	6.8	3.3
Other Sectors of Activity	13.5	13.2	-	2.4	5.9	-
Total	100.0	100.0	11.3	100.0	100.0	9.0

Note: The penetration rate of DCMT = number of companies with at least one DCMT/total number of companies in economic sector x 100.

Sources: 1. The Market for Flexible Automation Equipment. Ontario Ministry of Industry, Trade and Technology, Innovation and Technology Division, November 1985.

2. Enquête sur les équipements de production de l'industrie québécoise du travail du métal, Direction des biens d'équipements, MIC.

Excerpted from: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative. Direction des études sectorielles, DGRP, MIC, 1987.

economic activity considered, except perhaps metal product manufacturing, where the rate is significantly the same in both provinces.

It is also noteworthy that 87% of the DCMT in Ontario, and 94% of the DCMT in Quebec, are used by major groups connected with the machinery and metalworking sector, whereas only 13% and 6% of the digital control machines in Ontario and Quebec are integrated into the production process in other sectors of economic activity. In 1983, in Japan, approximately 20% of the DCMT fleet was used in sectors other than traditional sectors of activity, namely 10% in the textile industry, 7% in the pulp and paper and plastics industries, and close to 3% in the printing and lumber industries. Many of these industries are well represented in the economies of Quebec and Ontario but have only used DCMT in a very marginal way up until now.

If we now consider the penetration of digital control machine tools according to the size of the business, certain differences between the two provinces emerge. In Ontario, small companies (under 100 employees) account for 55% of the companies in the sector analyzed but only own 36% of the machines in use (Table 6.20). In Quebec, the percentage of small businesses is higher (68.4%) and they control 42.7% of the DCMT. The situation is reversed when it comes to large companies: they are more numerous in Ontario than in Quebec (26% as opposed to 11% of businesses) and control a higher percentage of the DCMT fleet (43% against 34.7%). However, a much higher concentration of DCMT has been observed in large companies in Quebec than in Ontario. The situation in medium-sized businesses is similar in both provinces.

6.5.3 - Robotization in Quebec and Canada

As you have probably noticed, neither the UQAM nor the CEC surveys on computerization afforded any explicit information on the robotization of business. However, with the help of the above-mentioned Ontario study and a few statistics on Quebec compiled by the Centre de recherche industrielle du Quebec (CRIQ), we were still able to draw a profile of robotization in Canada.

In 1985, between 1,100 and 1,200 robots had been installed in Canada, with close to 1,000 in Ontario and approximately 120 in Quebec. According to an Ontario Government study, the proportion of Canadian robots per sector of economic activity stood as follows in 1984:

– Automobiles and parts industry	69.1%
– Other manufacturing industries	20.7%
– Other organizations (education, government)	10.2%

If we exclude the automobile industry, Ontario had approximately 175 robots in the manufacturing sector in 1985, as

Table 6.20
Distribution of DCMT by Size of User Company
Ontario, Quebec, 1984

Size of Company	Ontario[1]		Quebec[2]	
	% of companies	% of DCMT	% of companies	% of DCMT
Small Companies (under 100 employees)	55	36	68.4	4.2.7
Medium-Sized Companies (100 to 499 employees)	19	21	20.5	20.6
Large Companies (500 employees or more)	26	43	11.1	34.7
	100	100	100.0	100.0

Sources: 1. The Market for Flexible Automation Equipment, Ontario Ministry of Industry, Trade and Technology, Innovation and Technology Division, November 1985.
2. Enquête sur les équipements de production de l'industrie québécoise du travail du métal, Direction des biens d'équipement, MIC.

Excerpted from: Le secteur de la machinerie et du travail du métal au Québec: importance économique et analyse comparative, Direction des études sectorielles, DGRP, MIC, 1987.

well as a few other robots used by government organizations, research and educational establishments, etc., namely between 275 and 300 robots in all.

According to data supplied by CRIQ, Quebec had 122 robots in 1985, divided among the following organizations:

industrial firms	75	robots
research or development institutes	29	"
educational establishments	18	"

Even if we disregard the automobile industry, Quebec trails significantly behind Ontario in the area of robotization. But what should also be noted is Canada's considerable lag behind the other industrialized nations. Table 6.21, which is drawn from the Ontario study on automation, displays the robot utilization rates for the major industrialized nations. Canada, with a ratio of 3.7 robots per 10,000 manufacturing jobs as at January 1, 1984, ranks second to last among these countries. According to the latest information, the ratio in Quebec was 2.5 robots per 10,000 manufacturing jobs in 1985.

6.5.4 - Analysis of Comparisons

What can we conclude from the comparisons made in this chapter? The answer to this question is not simple. First of all, comparisons with other countries tend to prove that Canada is lagging behind the other industrialized nations, both in terms of the purchase

Table 6.21
International Comparison of Robot Utilization
Major Industrialized Nations
January 1, 1984

Country	Number of Robots in Use	Manufacturing Jobs (000)	Robots per 10,000 Jobs
Japan	45 000	14 010	32.1
Sweden	1 900	941	20.2
West Germany	4 800	6 652	7.2
Czechoslovakia	1 845	2 554	7.2
France	3 592	5 172	6.9
Belgium	514	872	5.9
United States	9 400	19 946	4.7
Italy	2 000	5 117	3.9
Canada	702	1 886	3.7
United Kingdom	1 753	5 641	3.1

Source: The Market for Flexible Automation Equipment in Ontario. Ontario Ministry of Industry, Trade and Technology, Innovation and Technology Division, November 1985.

of digital control machine tools and the use of robots in business.

However, most of the DCMT find their main application in companies in the machinery and metalworking sector. Yet, Canada devotes a relatively smaller proportion of its resources to this economic sector than other industrialized nations do. One can therefore not expect the penetration of DCMT to be of the same order as in other countries. On the other hand, other countries have introduced DCMT in other sectors of activity besides metalworking and Canada certainly does not appear to be on the leading edge in this respect.

With respect to industrial robots, the generally accepted notion is, on the one hand, that the use of robots requires companies of a certain size and, on the other hand, that Canadian companies are relatively small by international standards. It is therefore plausible that the low penetration of robots in Canada is attributable to the size of the companies.

Thus, Canada does indeed seem to be lagging behind in terms of the penetration of industrial robots and digital control machine tools. The gap could in part be due to a different industrial structure from certain other industrialized nations. But it is also very likely that Canada's lag is real, notwithstanding the concept of industrial structure. Only a serious study of the causes will resolve the debate.

We are confronted by the same concerns when we compare the production equipment of Ontario and Quebec. Comparative data appearing in previous sections of this chapter tend to demonstrate that:

- the growth rate of the DCMT fleet has been far lower in Quebec than it has in Ontario, especially in recent years;
- the penetration rate of digital control machine tools is systematically lower in the economic sectors of Quebec;
- the DCMT and robot fleets are far smaller in Quebec than they are in Ontario.

As far as the growth rate of the DCMT fleet in Quebec is concerned, the slowdown observed since 1981 can be attributed to a number of factors. The unfavourable financial position of most companies following the 1981-1982 economic crisis, a hesitation on the part of some companies with respect to automation, and even saturation of some large companies in terms of DCMT, are all elements that can be invoked to explain this slowdown. The fact nonetheless remains that there has been a slowdown and it is important that we find out its exact causes.

Furthermore, the penetration rate and the size of the DCMT or robot fleets are both variables that tie in closely with the size of the businesses and the industrial structure of two provinces. Thus, Quebec has a larger proportion of small businesses than Ontario does, and it is normal that this should lead to a lower penetration rate for highly sophisticated and costly equipment.

As far as industrial robots are concerned, it goes without saying that, in the absence of a strong automobile industry, Quebec cannot aspire to a robot fleet comparable to that of Ontario. Clearly, the industrial structure of Ontario has a major impact on the robot fleet. Nevertheless, even if we exclude the automobile industry, Ontario still has two to three times as many robots as Quebec does. The phenomenon should be studied more carefully.

6.6 - Conclusion

The following conclusions can be drawn from this brief survey of the computerization of business:

- In general, regardless of the type of technological innovation or the sector of economic activity analyzed, the penetration rate of new technologies grows with the size of the business;
- The computer technologies that have, to date, been the quickest to establish themselves in companies of all types focused mainly on management and office work, even in the manufacturing sector where the computerization of office work generally precedes automation of the plant;
- A significant degree of penetration of digital control machine tools has been noted in small and very small metal products and machinery manufacturing firms in Quebec, in spite of the high cost of this equipment; this example is proof that DCMT are no longer the province of large companies;
- In spite of this situation, the automation of the production processes in manufacturing firms in Canada and Quebec seems to be lagging significantly behind the major industrialized nations, notably with respect to penetration of digital control machine tools and industrial robots.

Thus, development of industrial automation technologies can be expected to accelerate over the next five to ten years, in Canada and in Quebec. While management and office automation applications have already brought about major modifications in the organization of office work, the consensus is that the automation of production processes will have an even greater impact, especially on the adaptation of labour and the management of human resources.

In a recent summary[10], the Canadian Economic Council advocated five strategic objectives that will enable Canada to make up the perceived technological difference with ease:

- opening Canada up to technological innovation, in order to increase productivity, the competitive edge of industry, revenues, and the number of jobs;

- training of a labour force that is skilled, flexible and dynamic, by revising certain academic curriculums and on-the-job training programs;

- the implementation of measures that will facilitate the adaptation of labour to economic or technological changes;

- adoption of a new style of management that focuses on personnel management, on the rapport between management and the employees, and the organization of work;

- creation of a positive climate in labour relations, to promote the settlement of any problems connected with technological innovation.

In this context of technological refocusing, SMB may have an advantage over big business because of the flexibility of their structure: it is often easier to modify the organization of work or introduce new styles of management in small units. Nevertheless, SMB more often than not have fewer resources than big business does, which can delay the penetration of new technologies or the implementation of internal manpower training programs. And these are the two aspects most likely to be impacted by government assistance programs in the computerization of small and medium-sized business (SMB).

---

[10] Economic Council of Canada, Making Technology Work – Innovation and Jobs in Canada, 1987

Chapter 7

Small and Medium-Sized Business and Exports

In the 70s, the economic growth of industrialized nations was seriously hampered by successive increases in oil prices, which led to profound changes in the structure of the world economy. The mass influx of capital from the OPEC countries, and its recycling, created the general illusion of an economic recovery, especially in developing nations which borrowed heavily on the international financial markets. Galloping inflation, the volatility of the foreign exchange markets and the drop in the prices of raw materials were just some of the factors in the slowdown in economic activity around the world; there was even a world recession in 1981-1982.

Market conditions have altered radically as a result of this new international context and of the advent of new producers of consumer goods and high technology products. One need merely consider the lightning rise of Japan, South Korea, and a few developing countries to uncover the new face of the world economy.

From a traditional economy based on weak international competition, relatively slow technological growth compared to the previous five years, and on the strength of the economies of a few industrialized nations, we have moved on, in the last decade, to a new world economy where the rules of the game have radically changed. This new world economy is characterized, on the one hand, by more intense competition on the national and international markets and, on the other hand, by the dizzying speed with which technological change takes place. We now live in an international economic environment, such that no other country or company can be sure of maintaining a comfortable technological lead in any field. Thus, the relative protection that companies enjoyed on their own national and international markets is fading gradually, and the technological lead enjoyed by some countries in general, and by some companies in particular, is becoming increasingly short.

The gradual liberalization of trade, the internationalization of the flow of capital and the availability of knowledge will, in the next few years, serve to sharpen the competition between countries, and between companies; from this standpoint, companies will have no choice but to develop quality products and conquer new international markets.

The small and medium-sized businesses in Quebec are no exception to the rule. They are going to have to carve themselves a place on the export market, both nationally and internationally. To underscore this need, the present section offers a general outline of the position of small and medium-sized business (SMB) in the export sector. The first part describes the level and nature of international trade in Canada and in Quebec. The second part describes the role of Quebec's international services. Finally, the last section lists the major programs available to small and medium-sized business through the Government of Quebec and the Federal Government.

7.1 - International Trade in Canada and Quebec

7.1.1 - International Trade in Canada

Canada has one of the most open economies in the industrialized world, with commercial trade (exports and imports) accounting for about half of the gross national product (GNP). The importance of international trade[1] to the Canadian economy is well illustrated by the following facts: on the one hand, manufacturing exports accounted on average for a third of the value of all deliveries for the 1981-1985 period; on the other hand, imports represented close to a third of sales on the Canadian market.

In 1986, the value of exports and imports of goods accounted respectively for 25% and 23% of the GNP, compared to 19% and 16% in 1970. Between 1970 and 1986, the average annual growth rate for exports was 13.1%, compared to 11.3% for the GNP. The value of exports therefore multiplied by 6 in the space of 15 years, totalling 120 billion dollars in 1986.

In the last 15 years, the balance of trade (exports less imports) has always been positive, except in 1975. From 1979 to 1984, Canada's performance was one of the highest in the world, the trade surplus having risen from 4 billion to 21 billion dollars. It declined somewhat in 1985 (17 billion dollars), and then fell to 10 billion dollars in 1986. The drop in the trade surplus in 1986 can be attributed mainly to deteriorating terms of exchange, although a lower export volume also contributed to the situation. The general devaluation of the Canadian dollar and the strong increase in world oil and grain prices were largely the cause for the deteriorating terms of exchange.

Table 7.1 illustrates the fluctuations in the relative value of our transactions with our major trading partners. The United States is still Canada's leading trading partner, with Canadian exports totalling some 94 billion dollars and U.S. imports, approximately 77 billion dollars in 1986. This figure represents respectively 78% and 70% of the total value of our exports and imports. It is noteworthy that the United States has grown as an export market in recent years, with a relative share of 78% of the total in 1986, compared to 70% in 1977. The relative proportion of exports to

---

[1] The statistics on international trade in Canada and Quebec covers only the import and export of goods, and excludes services.

Table 7.1

Breakdown of Exports by Destination and of Imports by Place of Origin

Canada, 1977-1986

(in millions of dollars)

Year	United States			Japan			EEC		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1977	31 196	29 449	1 747	2 425	1 774	651	4 628	3 665	963
1978	37 812	34 845	2 967	2 988	2 249	739	4 925	4 693	232
1979	45 083	44 480	603	3 898	2 111	1 787	7 029	5 588	1 441
1980	48 975	47 343	1 632	4 275	2 810	1 465	9 516	5 682	3 834
1981	56 100	52 777	3 323	4 592	4 045	547	8 831	6 441	2 390
1982	58 074	47 072	11 002	4 788	3 552	1 236	7 472	5 691	1 781
1983	66 329	52 677	13 652	4 911	4 355	556	6 706	5 819	887
1984	85 026	65 890	19 136	5 971	5 476	495	7 003	8 136	-1 133
1985	94 346	73 641	20 705	5 933	6 061	-128	6 729	10 107	-3 378
1986	93 567	76 809	16 758	6 069	7 567	-1 498	8 058	12 632	-4 574

Year	Other OECD Countries			Rest of the World			Total		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1977	1 211	1 250	-39	5 035	5 385	-350	44 495	41 523	2 972
1978	1 273	1 449	-176	6 363	5 812	551	53 361	49 048	4 313
1979	1 904	1 887	17	7 668	7 091	577	65 582	61 157	4 425
1980	2 730	2 117	613	11 185	9 951	1 234	76 681	67 903	8 778
1981	2 589	2 174	415	12 320	11 703	617	84 432	77 140	7 292
1982	2 059	2 180	-121	12 167	8 244	3 923	84 560	66 739	17 421
1983	1 686	2 040	-354	11 070	8 163	2 907	90 702	73 054	17 648
1984	2 097	2 288	-191	12 122	9 703	2 419	112 219	91 493	20 726
1985	2 414	2 996	-582	10 836	9 978	858	120 258	102 783	17 475
1986	2 209	2 797	-588	10 729	10 694	35	120 631	110 498	10 133

Source: Bank of Canada, Revue de la Banque du Canada, Ottawa, April 1987.

the European Economic Community has declined in the last ten years, from 10.4% in 1977 to 6.7% in 1986. Over the same period, Japan's market share remained stable at 5% of the total exports. On the other hand, Canada quadrupled the value of its Japanese imports, which totalled 7.6 billion dollars in 1986, or 6.8% of the total import value, compared to 4.3% a decade earlier.

In 1986, Canada reported a trade surplus of some 17 billion dollars with the United States, and trade deficits of approximately 1.5 billion dollars with Japan, 4.6 billion with EEC member-countries, and 600 million with the other OECD countries; the trade balance with the rest of the world revealed a surplus of 35 million dollars in 1986.

Table 7.2 presents a breakdown of exports by product type. As shown, the automobile and parts sector exported 34 billion dollars in goods in 1986, or 29% of the total exports. The food products, energy products and pulp and paper sectors each account for approximately 10% of the total exports.

Table 7.3 reveals the automobile and parts sector to be the largest import sector in Canada, with over 33 billion dollars or 30% of total imports. It should be noted that, in 1986, Canada reported a trade surplus of 7.1 billion dollars in the automobile sector, and a deficit of 6.1 billion in the automobile parts sector.

7.1.2 - International Trade in Quebec

Quebec exports approximately 40% of its gross domestic product (GDP) to the rest of Canada and elsewhere in the world. In 1986, Quebec's international exports (outside of Canada) totalled 19.9 billion dollars and its imports, 21.5 billion. The export/GDP ratio in Quebec is one of the highest among countries with market economies. Between 1980 and 1984, Quebec's manufacturing sector took on increasing importance on the export markets; thus, the sector's share of total international exports increased from 58% in 1980 to 70% in 1984. What is more, the small and medium-sized manufacturing firms in Quebec also increased their share of international trade: in 1984, they accounted for 6.6% of the total international exports in Quebec, compared to 5.4% in 1980.

Between 1979 and 1986, Quebec's international exports increased from 12.2 billion dollars to 19.9 billion (Table 7.4). Most of our exports are destined for the United States, and represented a total of 15.5 billion dollars in 1986, or 78% of total exports; in 1979, the percentage was 64%. Western Europe ranks second, with exports of 2.2 billion dollars, or 11% of the total; in Europe the United Kingdom ranks first, followed by the Netherlands, West Germany and France. Asia is third with close to 1 billion dollars, 300 million of which goes to Japan.

Table 7.2
Breakdown of Exports by Product Type
Canada, 1977-1986
(in millions of dollars)

Year	Food Products	Energy Products	Softwood	Pulp and Paper	Other Metals and Minerals	Chemical Products
1977	5 403	5 562	2 904	4 990	7 400	1 755
1978	6 210	6 057	3 937	5 695	8 509	2 378
1979	7 648	9 045	4 684	7 052	10 537	3 334
1980	9 450	10 933	4 197	8 534	14 177	4 094
1981	10 775	11 838	3 832	9 035	14 063	4 704
1982	11 335	12 482	3 742	8 199	11 999	3 737
1983	11 549	12 793	5 045	8 024	11 925	4 152
1984	12 231	14 742	5 591	9 942	14 213	4 953
1985	11 081	16 736	5 905	10 083	14 802	5 006
1986	11 288	11 377	6 343	11 247	15 381	4 960

	Automobiles and Parts	Other Manufactured Products	Other Products	Total
1977	10 322	6 132	27	44 495
1978	12 394	7 803	378	53 361
1979	11 805	11 150	327	65 582
1980	10 890	13 585	821	76 681
1981	13 483	15 292	1 410	84 432
1982	16 819	15 339	908	84 560
1983	21 277	15 124	813	90 702
1984	29 435	19 213	1 899	112 219
1985	33 208	21 150	2 287	120 258
1986	34 358	23 492	2 185	120 631

Source: Bank of Canada, Revue de la Banque du Canada, Ottawa, April 1987.

Table 7.3
Breakdown of Imports by Product Type
Canada, 1977-1986
(in millions of dollars)

Year	Food Products	Energy Products	Other Natural Resources	Automobiles and Parts
1977	3 903	4 201	7 589	11 132
1978	4 454	4 471	9 597	13 078
1979	5 077	5 765	13 222	14 900
1980	5 673	8 410	14 880	13 321
1981	6 168	9 692	15 876	15 739
1982	5 719	6 737	12 950	14 645
1983	5 846	5 161	14 733	18 744
1984	6 907	6 133	17 237	25 719
1985	6 860	5 455	19 152	31 713
1986	7 606	5 125	20 152	33 371

	Electronic and Telecommunications Equipment	Industrial Machinery	Other Equipment and Tools	Other Manufactured Products	Other Consumer Goods	Total
1977	1 675	3 514	2 606	2 500	4 133	41 253
1978	2 134	4 289	3 170	3 251	4 604	49 048
1979	2 798	5 619	3 645	4 601	5 530	61 157
1980	3 699	6 752	3 936	4 995	6 237	67 903
1981	4 817	7 297	4 595	5 895	7 061	77 140
1982	4 983	5 657	4 250	4 825	6 973	66 739
1983	5 831	5 292	4 894	4 808	7 745	73 054
1984	8 247	6 604	6 096	5 450	9 100	91 493
1985	7 920	7 925	6 677	5 560	11 521	102 783
1986	8 615	9 200	7 298	6 124	13 007	110 498

Source: Bank of Canada, Revue de la Banque du Canada, Ottawa, April 1987.

Table 7.4
Value of Quebec's International Exports by Destination
1979-1986
(in millions of dollars)

	1979	1980	1981	1982	1983	1984	1985	1986
North America, including:	7 791	8 918	9 818	9 796	10 412	13 029	14 118	15 458
United States	7 786	8 913	9 812	9 291	10 408	13 023	14 116	15 453
Western Europe, including:	2 493	3 478	2 598	2 413	2 040	1 890	2 078	2 262
West Germany	410	623	320	311	275	216	367	348
France	202	338	255	258	209	251	223	317
Italy	205	256	165	137	113	140	156	163
The Netherlands	364	603	405	379	331	331	373	355
The United Kingdom	727	834	773	791	662	583	506	544
Eastern Europe	272	301	113	101	89	83	109	88
The Middle East	195	252	309	458	317	329	320	258
Africa	169	278	414	348	310	407	294	219
Asia, including:	577	783	702	1 001	1 091	778	987	932
Japan	296	364	297	377	439	266	327	300
The South Pacific	111	136	104	72	83	76	107	[illegible]1
South America	289	416	384	299	268	339	329	326
Central America and the Caribbean	318	349	514	381	361	328	313	286
TOTAL	12 205	14 886	14 988	14 401	14 960	17 266	18 624	19 936

Source: Bureau de la statistique du Québec, Commerce international du Québec, 1986.

Quebec's international imports were valued at 21.5 billion dollars in 1986 (Table 7.5). The diversity of countries of origin is more extensive than it is in the case of exports. The United States ranks first: Quebec imported 10.5 billion dollars from this country in 1986, or nearly half of its total international imports. Imports from Europe rank second with a total of 5.5 billion dollars, and third place is held by Asia with 3.2 billion dollars, 1.5 billion of which originates from Japan. Between 1979 and 1986, the relative share of imports originating from the United States dropped from 51.5% to 48.8%, and the proportion originating from Western Europe and Asia increased, from 21.2% to 25.6% and from 8.7% to 14.9% respectively. Imports from Japan almost quintupled between 1979 and 1986.

Tables 7.6 and 7.7 reveal the value of Quebec's international exports and imports, for 25 major products. Ten products account for more than half of the total exports, which denotes a heavy concentration in international trade in Quebec. For instance, five products (newsprint, automobiles and chassis, aluminum and alloys, lumber, and aircraft engines and parts) account for 39% of the total value of our international exports. On the other hand, the import sector is less concentrated, given that the value of the five major import products represents 29% of the total import value.

7.1.3 - Performance of Small and Medium-Sized Business (SMB) on the International Market

The total value of shipments by small and medium-sized business in Quebec rose from 6.6 billion dollars in 1975 to 16.8 billion in 1986 (estimate). What is more, the value of goods shipped abroad by SMB in the manufacturing sector increased from 786 million dollars in 1980 to 1.2 billion in 1984. It should be noted that the average annual growth rate for international shipments was 13.6% over the 1975-1986 period, compared to 11.0% for all deliveries by small and medium-sized businesses. Thus, the relative importance of SMB shipments to international markets, compared to overall shipments by SMB, increased significantly between 1975 and 1984, from 4.4% to 7.4%.

During the 1975-1984 period, the destination of shipments by SMB in Quebec's manufacturing sector varied little. Table 7.8 reveals that the United States was the destination of 78% of the products sold by Quebec SMB in 1984, while 8% were destined for Europe and 14% for other countries. As with Quebec's total exports, international shipments by small and medium-sized manufacturing firms are highly concentrated. As Table 7.9 shows, seven industrial groups were the source, in 1984, of 65.4% of the international exports by SMB. These were, in order of importance, wood (15.3%), food and

Table 7.5
Value of Quebec's International Imports by Place of Origin
1979-1986
(in millions of dollars)

	1979	1980	1981	1982	1983	1984	1985	1986
North America, including:	6 247	7 059	8 090	6 408	8 379	10 215	10 240	10 491
United States	6 247	7 059	8 090	6 405	8 379	10 214	10 239	10 490
Western Europe, including:	2 571	2 550	3 114	2 665	2 723	3 716	4 737	5 503
West Germany	515	489	569	508	583	816	929	1 040
France	412	409	439	444	454	650	721	796
Italy	305	261	302	267	317	422	565	665
The Netherlands	78	100	87	71	116	194	212	232
The United Kingdom	583	585	838	659	454	714	1 152	1 386
Eastern Europe	168	152	168	94	130	157	137	155
The Middle East	427	607	792	375	524	321	117	177
Africa	217	169	587	400	242	399	450	352
Asia, including:	1 059	1 090	1 766	1 396	1 888	2 449	2 600	3 196
Japan	314	314	774	701	903	1 091	1 205	1 482
The South Pacific	120	116	98	84	88	71	90	149
South America	1 078	1 545	1 774	1 358	1 068	1 203	1 181	866
Central America and the Caribbean	243	394	939	817	726	754	687	597
TOTAL	12 130	13 682	17 328	13 597	15 768	19 285	20 239	21 486

Source: Bureau de la statistique du Québec, Commerce international du Québec, 1986.

Table 7.6
Value of Quebec's International Exports of 25 Major Products 1984-1986 (in millions of dollars)

	1984		1985	1986	
– Newsprint	2 541	(1)	2 675	2 935	(1)
– Automobiles and chassis	1 389	(2)	1 955	1 914	(2)
– Aluminum and alloys	1 199	(3)	1 080	1 505	(3)
– Softwood Lumber	642	(4)	677	737	(4)
– Iron ore, concentrates and scrap	599	(6)	647	573	(7)
– Electronic tubes and semi-conductors	529	(7)	623	603	(6)
– Aircraft engines and parts	627	(5)	611	676	(5)
– Telecommunications equipment	513	(8)	484	369	(13)
– Fresh, refrigerated and frozen meats	348	(13)	345	407	(10)
– Copper and alloys	415	(9)	343	369	(14)
– Electricity	393	(10)	341	374	(12)
– Aircraft assembly, equipment and parts	276	(14)	333	412	(8)
– Unprocessed asbestos	358	(12)	331	315	(15)
– Wood pulp and substitutes	367	(11)	320	400	(11)
– Zinc and alloys	236	(17)	216	107	(24)
– Heating oil	136	(23)	211	96	(25)
– Whole aircraft, with engines	251	(15)	201	279	(16)
– Office machines and equipment	237	(16)	199	191	(19)
– Dairy products	205	(18)	187	148	(23)
– Other automobile parts and accessories	157	(19)	183	199	(18)
– Primary iron and steel	128	(25)	167	149	(22)
– Other non-metallic minerals	141	(22)	163	226	(17)
– Furniture and accessories	131	(24)	155	189	(20)
– Railway cars	82	(35)	152	409	(9)
– Miscellaneous garments	115	(28)	129	177	(21)
Total for 10 Major Products	8 847		9 440	10 171	
Total for 25 Major Products	12 015		12 728	13 759	
Total for All Products	17 266		18 624	19 936	

Note: The table presents products classified by order of importance in 1985. The numbers in parentheses for 1984 and 1986 indicate the position held by these products for those years.

Source: Bureau de la statistique du Québec, Commerce international du Québec, 1985 et 1986.

Table 7.7
Value of Quebec's International Imports of 25 Major Products
1984-1986
(in millions of dollars)

	1984		1985	1986	
– Automobiles and chassis	2 278	(1)	3 037	3 263	(1)
– Other bituminous substances	1 806	(2)	1 768	1 216	(2)
– Electronic tubes and semi-conductors	655	(4)	678	684	(3)
– Automobile parts and accessories	664	(3)	603	313	(10)
– Trucks and chassis	402	(7)	507	575	(4)
– Aircraft engines and parts	412	(5)	381	395	(6)
– Office machines and equipment	369	(9)	338	410	(5)
– Heating Oil	410	(6)	318	324	(9)
– Aluminum ore, concentrates and scrap	272	(11)	292	326	(8)
– Aircraft assembly, equipment and parts	270	(12)	280	328	(7)
– Televisions, radios and phonographs	269	(13)	264	292	(11)
– Non-knit outerwear	215	(14)	224	261	(13)
– Gasoline	24	(27)	206	162	(19)
– Commercial telecommunications equipment	192	(16)	208	250	(15)
– Other wide fabrics	188	(18)	196	220	(16)
– Coffee	199	(15)	188	276	(12)
– Fresh and frozen fruit	173	(19)	182	202	(17)
– Drilling equipment for mines, oil and gas	149	(22)	182	257	(14)
– Automobile engines and parts	190	(17)	153	73	(25)
– Other industrial machinery	126	(25)	149	182	(18)
– Steel plates, sheets and sheeting	108	(31)	147	160	(20)
– Wide cotton fabrics	98	(37)	135	139	(23)
– Plastics and synthetic rubber	139	(33)	132	156	(21)
– Copper ore, concentrates and scrap	91	(43)	132	126	(24)
– Yarns and threads, artificial fibres	124	(26)	130	145	(22)
Total for 10 Major Products	7 538		8 202	7 834	
Total for 25 Major Products	9 923		10 830	10 735	
Total for All Products	19 285		20 239	21 486	

Note: The table presents products classified by order of importance in 1985. The numbers in parentheses for 1984 and 1986 indicate the position held by these products for those years.

Source: Bureau de la statistique du Québec, Commerce international du Québec, 1985 et 1986.

Table 7.8
Destination of Shipments by Exporting Manufacturers Classified as SMB
1982-1984
(in millions of dollars)

Destination	**1982**	**1983**	**1984**
Quebec	3 852.1	4 916.8	5 09.7
Rest of Canada	2 743.5	3 309.3	3 405.6
Atlantic Provinces	375.3	457.6	463.8
Ontario	1 688.9	2 045.1	2 151.9
Western Provinces and Territories	679.3	806.6	789.9
Total Inside Canada	**6 595.6**	**8 226.1**	**8 504.3**
United States	567.6	735.9	894.8
EEC	90.6	50.6	71.9
Rest of Europe	32.2	12.8	20.5
Other Countries	157.3	141.8	160.8
Total Outside Canada	**847.7**	**941.1**	**1 148.0**
General Total	**7 443.3**	**9 167.2**	**9 652.3**

Source: Bureau de la statistique du Québec, Statistiques des PME manufacturières au Québec, Québec, August 1987.

Table 7.9
Destination of Shipments by Exporting Manufacturers Classed as SMB, by Industrial Group
1982-1984
(in millions of dollars)

Sector	1982				1983				1984			
	Quebec	Rest of Canada	Intern'l	Total	Quebec	Rest of Canada	Intern'l	Total	Quebec	Rest of Canada	Intern'l	Total
1. Food and beverages	722,2	230,6	148,5	1 101,3	939,2	264,2	149,9	1 353,3	808,9	265,0	167,3	1 241,2
2. Tobacco	x	x	x	x	5,8	1,6	x	7,4	x	x	x	x
3. Rubber and plastics	170,7	107,8	31,6	310,1	256,1	147,1	59,1	462,3	242,0	170,4	76,6	9,0
4. Leather	105,4	115,2	16,6	237,2	104,1	119,4	11,0	234,5	95,3	101,6	15,9	212,8
5. Primary textiles	164,8	105,7	8,2	278,7	148,3	118,0	5,8	272,1	177,6	106,3	9,2	293,1
6. Textile products	113,6	131,4	12,3	257,3	141,2	163,2	9,8	314,2	151,2	152,6	13,6	317,4
7. Clothing	589,8	726,1	60,4	1 376,3	651,5	833,9	59,5	1 544,9	616,9	870,0	76,6	1 563,5
8. Wood	253,6	104,4	116,5	474,5	419,1	142,9	176,0	738,0	428,1	155,4	175,2	758,7
9. Furniture	162,6	185,0	38,0	385,6	244,2	221,3	44,0	509,5	261,5	189,1	55,5	506,1
10. Paper	191,5	110,2	17,7	319,4	221,6	121,2	27,4	370,2	260,5	125,8	50,4	436,7
11. Printing, publishing	222,7	83,8	20,2	326,7	312,1	85,1	28,0	425,2	358,7	105,1	33,5	497,3
12. Primary metals	88,1	42,1	33,6	163,8	71,5	60,1	39,3	170,9	94,3	67,0	40,2	201,5
13. Metal products	299,1	199,3	46,5	544,9	423,4	261,3	45,5	730,2	446,8	226,6	63,3	736,7
14. Machinery	95,3	90,2	58,2	243,7	148,7	101,6	80,4	330,7	174,6	146,8	112,3	433,7
15. Transportation equipment	58,0	63,1	38,3	159,4	72,9	57,4	36,9	167,2	88,7	88,4	45,8	22,9
16. Electrical products	151,7	195,7	44,6	392,0	186,1	155,9	50,9	392,9	208,5	185,1	78,5	472,1
17. Non-metallic mineral products	89,2	57,0	54,2	200,4	107,0	56,9	33,6	197,5	119,3	46,4	30,6	196,3
18. Petroleum products	x	x	4,9	4,9	15,8	15,9	x	31,7	29,5	14,2	7,2	50,9
19. Chemical products	233,9	195,9	41,6	471,4	280,9	210,6	28,9	520,4	346,4	204,3	39,9	590,6
20. Miscellaneous	139,9	x	55,8	195,7	167,3	171,7	55,1	394,1	189,9	185,5	56,4	431,8
PARTIAL TOTAL(1)	3 852,1	2 743,5	847,7	7 443,3	4 916,8	3 309,3	941,1	9 167,2	5 098,7	3 405,6	1 148,0	9 652,3

x: Confidential data.

(1) The total does not include the confidential data.

Source: Bureau de la statistique du Québec, Statistiques des PME manufacturières au Québec, Québec, August 1987.

beverages (14.6%), machinery manufacturing (9.8%), electrical products (6.8%), rubber and plastics (6.7%), clothing (6.7%), and metal products (5.5%).

7.2 - Quebec's International Services

The Government of Quebec has long understood the importance of foreign relations, having appointed its first trade representative to France in 1882. Today, an extensive network of delegations and bureaus has been set up in over 15 countries. These delegations or bureaus[2], 29 in all, are located in the larger cities of countries or provinces that represent major markets for Quebec business. Their general mission is to promote the economic, cultural, social and educational interests of Quebec.

Quebec's international services represent the interests of Quebec abroad and coordinate the international activities of Quebec's ministries and public organizations. They therefore play a very wide variety of roles. Representatives posted abroad are well-informed as to our needs, our policies and our institutions, and are therefore well able to promote Quebec and its assets.

The activities of Quebec's international services can extend to any field of interest to Quebec society. In the area of trade relations, the mission of international services is to prospect for new export markets for Quebec's goods and services, to seek out new technologies, and to promote foreign investment in Quebec. Also, and this is one of the most important aspects of the role played by our international services, they offer technical assistance to business people and to public and private organizations intending to penetrate international markets.

In the context of this document, which is specifically concerned with the role of Quebec's representatives in the economic sector, our international representatives are influential in winning contracts, promoting sales and developing markets. They pave the way, establish contact and organize meetings. Their know-how, their knowledge of the distribution networks, and of the merchandising and marketing methods most appropriate to each country, as well as the applicable standards, can help Quebec businesses prepare for and enhance their knowledge of the people they will be doing business with. All of these efforts are designed to create a suitable climate for commercial trade and investment. Aside from the promotion of Quebec's goods and services in the strictest sense of the word, Quebec's international services, by the very nature of their mandate, contribute to many other cultural and scientific activities that can help them understand the mentality of the people of that country, as well as their customs and lifestyle. This is very often the key to success when dealing with foreign companies.

---

[2] Twenty-five delegations or bureaus report to the Ministère des Relations internationales and four Bureaux du Québec in Canada report to the Secretary of Canadian Intergovernmental Affairs.

7.2.1 - A Network of International Services

The Government of Quebec has built a vast network of international services spanning Africa, North America, Latin America, Asia and Europe.

Quebec maintains four bureaus in Canada: in Moncton, Edmonton, Ottawa, and Toronto. In the United States, Quebec has put a great deal of effort into setting up a network of delegations and bureaus that cover all the major nerve centers. Quebec is therefore present in Atlanta, Boston, Chicago, Lafayette, Los Angeles, New York and Washington. Latin America also affords some attractive business opportunities for Quebec and the latter is officially represented in Bogota, Buenos Aires, Caracas, Mexico City and Port-au-Prince. Over the last ten years, a large number of Asian countries have become major business partners on the world economic scene, as well as newly industrialized nations which represent very attractive markets for Quebec, especially in the fields of energy, transportation, telecommunications and engineering; given the size of the Asian population, Quebec also perceives it as an extraordinary market for consumer goods, including agricultural products. The Government of Quebec has therefore established services in Bangkok, Hong Kong, Singapore and Tokyo. Finally, Europe, because of the special ties that bind us, also affords some extremely attractive business opportunities for Quebec. Quebec is therefore represented in Brussels, Dusseldorf, Lisbon, London, Milan, Paris, Rome and Stockholm.

7.2.2 - The Economic Role of Quebec's International Services

For a clear understanding of the role that Quebec's international services can play, the best method remains perhaps to present a general outline of certain achievements.

7.2.2.1 - Latin America

Mexico is an attractive market for commercial trade. In 1985-1986, the Délégation du Québec in Mexico City was actively involved in a number of trade missions to Mexico. This support led to a contract to complete a feasibility study for a foundry, and to exchanges regarding a pulp and paper production process. Livestock sales and the transportation sector are also proving to be worthwhile markets in Mexico. Two Quebec companies are currently doing business in Mexico in the software sector.

In Caracas, the vast majority of business transactions carried out in 1985-1986 were in the agro-industry sector. A new trade bureau in Bogota, Colombia, also increased the number of exchanges of experts, in such sectors of excellence as natural resources, hydraulics, and waste water treatment.

7.2.2.2 - Asia and the South Pacific

A growing number of missions have also helped enhance the ties between Quebec, and Asia and the South Pacific. In the economic field, trading continues to improve, and a milestone was achieved with the announcement of a substantial investment in the automotive sector, by Hyundai of South Korea.

The importance of Japan as one of Quebec's major partners in business and finance is reaffirmed with each passing year, and efforts are being stepped up to build contacts and exchanges in other fields of activity, namely the industrial, educational, scientific and cultural sectors. The diversification of exports, an increase in the number of co-production agreements, technological exchanges and investments, as well as a remarkable breakthrough by the Montreal Urban Community (M.U.C.) and the Quebec Urban Community (Q.U.C.) in the financial, industrial and scientific fields, are all evidence of increased economic activity.

Quebec is pursuing its efforts to develop trade relations, especially with South Korea, the People's Republic of China and Hong Kong. Major economic sectors include energy, transportation, communications, agrofood, natural resources, and technological and scientific exchanges.

7.2.2.3 - The United States

Commercial trading between Quebec and the United States is such that Quebec's international services play a major role in that country. For instance, the Délégation du Québec in New York has worked with 182 Quebec companies in the export of goods and services.

The Délégation du Québec in Boston serves all six of the New England states. Since 1969, the area has been our third largest trading partner with regard to exports. Our sales to New England have increased by 49.3% since 1982 and totalled 2.3 billion dollars in 1985, which is 16.4% of our exports to the United States. The Délégation has continued to consolidate its industrial promotion and investment prospecting activities. Three hundred and nineteen operations were planned and executed in the last six months of 1985-1986, 153 of which involved manufacturing firms in Quebec. Science and technology being a major focus of activity, priority has been assigned to organizing a number of technological missions involving research and development institutes in the area.

Other Délégation du Québec offices in the United States have been highly active in the promoting of Quebec's products. Hundreds of companies have benefited from the assistance and support of the economic services of delegations in New York, Chicago, Los Angeles, Atlanta and Lafayette. For example, the Chicago delegation was involved in 18 industrial agreements in 1985-1986 and did prospecting at 70 trade shows. In Los Angeles, economic services processed 274 requests by exporters in Quebec. It also hosted and made the travel arrangement for five missions.

7.2.2.4 - Europe

For some time, the European nations have been major partners in the development of Quebec; on the one hand, because of the diversity of the economic exchanges and, on the other hand, because of our many cultural, educational and scientific ties.

The Délégation générale du Québec in London covers the United Kingdom, Ireland and the northern countries. The United Kingdom plays an important economic role because it represents, after the United States, the best world market for Quebec's products, especially finished goods.

Italy also represents enormous potential for technological exchanges and investments. Italian industry, especially small and medium-sized business, is a technological leader in the machinery, metal and plastic products, robotics, electronics, and automobile parts sectors, and offers attractive opportunities for licensing agreements. In 1985-1986, the economic service of the Bureau du Québec in Milan processed over 70 export applications, 35 draft industrial agreements and 45 investment projects.

The relationship between France and Quebec is healthy and rich. Over the years, the Délégation générale du Québec in Paris has forged strong ties with the economic and scientific sectors of France. For instance, the economic development program has helped hundreds of manufacturers in France and Quebec prospect for overseas markets in often highly specialized fields, such as medical electronics, robotics, fashion, automated quality control, and aerospace subcontracting. There is also an exchange program for small and medium-sized businesses and industries (PME-PMI) whose purpose is to help Quebecers make contact with small and medium-sized French industries and vice versa. What is more, the industrial research and technological innovation program created in 1981 enables small and medium-sized businesses, with little or no structure or budget for research, to engage in joint industrial research for the creation and marketing of new products. Finally, scientific and technical cooperation is applicable to almost all sectors of activity.

Quebec's network of international services is one of the means selected by the government to encourage and promote the sale of Quebec's goods and services, and to stimulate foreign investments in Quebec. It is the nature and role of Quebec's services to offer small and medium-sized business one of the most effective means of penetrating foreign markets. The calibre of the personnel, the variety of services, and a profound knowledge of the market are major assets that have been made available to small and medium-sized businesses, to help them achieve their objectives and ensure that their efforts to penetrate foreign markets are successful.

7.3 - Government Export Assistance Programs

The governments of Quebec and Canada offer a variety of assistance programs for Quebec businesses, including export assistance programs. In Quebec, the ministère du Commerce extérieur et du Développement technologique and the Société de développement industriel du Québec are the two major government organizations that administer programs designed to promote the export of Quebec's goods and services. At the federal level, the Department of External Affairs administers the Export Development Program, and the Export Development Corporation is responsible for the insurance and financing programs.

7.3.1 - Assistance Programs Available through the Ministère du Commerce extérieur et du Développement technologique du Quebec (MCEDT)

7.3.1.1 - Courses and Seminars on External Trade

1. Objective
   These courses and seminars are designed for business men and women in Quebec, to help them prepare to deal with international competition. These courses and seminars of varying length cover the different aspects of exporting, such as international markets, commercial practices, marketing strategies, industrial agreements, consortiums, international finance organizations and export middlemen.

2. Forms of Assistance
   The seminars and courses are organized in cooperation with local agencies (chambers of commerce, associations, etc.). In addition to providing technical and consulting services, the Ministère can also provide financial assistance for the promoters of these seminars and courses, by assuming some of the costs connected with the organization of these events.

3. Eligibility
   The program is open to anyone in business who would like to increase their knowledge and expertise regarding external markets.

4. Registration Procedure
   Companies must register with the organizations giving these seminars and pay all applicable tuition fees.

7.3.1.2 - Comex-50

1. Objective
   This program enables graduates of Business and Commerce faculties to acquire practical experience in international trade by means of training periods in companies, and in specialized public and private organizations. Thus, it gives these companies and organizations access to the services of qualified university graduates.

2. Content
   The selected graduates receive training in the following aspects, among others:

- The "Introduction au commerce extérieur" course given by the MCEDT, and tours of provincial and federal government departments and agencies.
- Practical training periods in companies where they can apply their newfound knowledge.

3. Forms of Assistance

Trainees receive an allowance from the Ministère.

4 .Eligibility

The program is open to graduates of business and commerce faculties.

5. Selection of Applicants

The selected applicants must be recommended by one of the universities in Quebec. A limited number of practical training periods are available to each university under this program, and the university must select the candidates and submit their applications to the Ministère.

7.3.1.3 - APEX-Prospection

1. Objective

The aim of this program is to help companies get through the initial stages of exporting. It helps companies prospect for and develop new external markets and encourages the exchange of technologies between Quebec companies and foreign companies.

The program includes the following activities:

- participation in trade shows outside Quebec;
- prospecting for markets with good export potential;
- negotiating and concluding industrial agreements with foreign companies.

2. Forms of Assistance

Financial assistance is available in the form of subsidies. The latter includes a per diem allowance and can cover up to 50% of the eligible costs relating to the following aspects: transportation of individuals and samples; translation, except in French and in English, of catalogues and technical manuals; interpreters' services, except in French and in English; the purchase of specifications; the leasing of space; construction of exhibits, and advertising insertions.

Maximum assistance:

- $10,000.00 to participate in trade shows;
- $5,000.00 to prospect for markets and negotiate industrial agreements.

3. Eligibility

The following are eligible for the program:

- businesses that are incorporated or duly registered, commercial or industrial cooperatives, professional associations in the agro-food

sector that are duly assigned to handle exports, and export agents representing Quebec companies that are eligible for the program;
- any company operating in Quebec, whether a manufacturer, a cultural industry governed by Section 4 of the Act respecting the Société de développement des industries de la culture et des communications (SODICC), R.S.Q., Chap.S-10.01, a consulting firm, or a business in the agro-food sector;
- Consortiums of these companies, and export agents duly retained by Quebec companies.

The following are not eligible for the program:
- any non-profit group or company, with the exception of cooperatives subject to the Cooperatives Act (R.S.Q., Chap.C-67.2) and professional associations in the agro-food sector;
- any corporation wholly owned by a government or whose stock is held entirely by a government, except if said state-owned company is part of a consortium, with other companies that are eligible for the program;
- financial institutions;
- legal and notarial practices;
- real estate brokers;
- personal service companies.

To be eligible for the program, a company must:
- be established in Quebec and have operated an establishment there for at least 12 months. A new company, resulting from a merger or a change in charter, may be eligible if it has been in operation for at least 12 months. A change in corporate name does not represent a change in the status of the company;
- to be eligible for the western and eastern Canadian markets (the Ontario market being excluded from this program), have recorded over $200,000 in sales for the operating year preceding the application to the program or for its last financial year, and $500,000 to be eligible for any other market. A business volume of $200,000 will, however, be acceptable for cultural industries regardless of the target market. Business volume will not be a criterion for the eligibility of professional associations in the agro-food sector;
- not have received more than two grants under the APEX-Prospection program during the Ministère's financial year (April 1 to March 31) in which the application was filed;
- not have applied for and/or obtained assistance under the APEX-Marketing program

for the market covered by the new application;
- not have already received two grants under the APEX program for a similar activity over a five-year period; by similar activity is meant participation in the same trade show or in a mission on the same market.

4. Procedure

All applications must be submitted on a special form prepared by the Ministère and must include all supporting documents indicated on the form. No application shall be considered as submitted to the Ministère unless all the information requested and all required supporting documents have been supplied to the Ministère.

An application filed under the APEX-Prospection Program will not be considered if another application for financial assistance has been submitted for the same purposes to another government.

The assistance requested must be used to promote Quebec content or, in the case of industrial agreements, to improve the competitiveness of companies established in Quebec.

The application must involve a project whose execution costs exceed $1,000.00.

7.3.1.4 - APEX-Marketing

1. Objective

The program is designed to enable companies that have identified a promising export market to perform a market analysis, and to design and implement a marketing strategy. It can also help set up an export structure within the companies.

APEX-Marketing encourages marketing activities for a specific market on an annual basis. There are two stages to the program, in order to help companies achieve specific objectives in gradual fashion.

In Phase I, the company analyzes the market and develops a marketing strategy for exporting to a specific market. Phase II allows the company to implement its marketing strategy.

2. Forms of Assistance

The Ministère may grant companies maximum financial assistance of $50,000, for a given market, for both phases of the program. The government's maximum contribution for Phase I of the program is $5,000.

Financial assistance includes a per diem allowance and can cover up to 50% of the eligible expenses, namely:
- transportation of individuals and samples; leasing of space;

construction of exhibits; production (excluding printing) and translation, except in French and in English, of catalogues, technical manuals and audiovisual materials; the creation and insertion of advertisements; interpreters' services, except in French and in English;
- laboratory costs and the cost of certification outside Quebec; the acquisition of calls for tender and specialized reference materials; the leasing of new premises outside Quebec; the salary for a new job created within the company, in connection with external markets.

3. Eligibility

The following are eligible for the program:
- commercial firms that are incorporated or duly registered, commercial or industrial cooperatives, professional associations in the agro-food sector that are duly commissioned to export, and export agents that duly represent Quebec companies eligible for the program, manufacturing companies, cultural industries governed by Section 4 of the Act respecting the Société de développement des industries de la culture et des communications (SODICC), R.S.Q., Chap.S-10.01, consulting services, construction companies, and consortiums formed by these companies.

The following are not eligible for the program:
- any non-profit group or company, with the exception of cooperatives governed by the Cooperatives Act (R.S.Q., Chap. C-67.2), and professional associations in the agro-food sector;
- any corporation wholly owned by a government or whose stock is held entirely by a government, except if such state-owned corporation is part of a consortium, with other companies deemed eligible for the program;
- financial institutions;
- real estate brokers;
- legal and notarial practices;
- personal service companies.

To be eligible for the program, the company must:
- be established in Quebec and have operated an establishment there for at least 18 months. A new company, resulting from a merger or a change in the charter, may be eligible if it has operated for at least 18 months, or for an operating time equal to that of the company filing the application plus that of those companies whose continuity the new company will ensure. A change in corporate name

does not constitute a change in corporate status;

- not have an application currently under consideration for the APEX-Marketing program. This condition applies to all companies including consulting firms and construction companies that are controlled or whose stock is controlled by a single group of shareholders.

4. Procedure
   - All applications must be submitted on a special form prepared by the Ministère and must include all supporting documents indicated on the form. No application shall be considered submitted to the Ministère until all the information requested and the required supporting documents have been supplied to the Ministère.
   - All applications must be submitted to the Ministère at least six weeks before activities are to begin.
   - An application filed under the APEX-Marketing program will not be approved if another application for financial aid has been submitted to another government for the same purpose.
   - The requested assistance must be used to promote Quebec content.
   - The application must involve a project whose execution costs exceed $10,000 for Phase I and $20,000 for Phase II.

7.3.1.5 - ACTIM-MCEDT

1. Objective

   This cooperative program sponsored by the Agence pour la coopération technique, industrielle et économique (ACTIM) of France and the Ministère du Commerce extérieur et du Développement technologique (MCEDT) of Quebec is an instrument available to small and medium-sized businesses in France and Quebec, that are looking for overseas partners for industrial agreements.

2. Forms of Assistance

   The financial assistance includes a travel allowance as well as the transportation costs for the representatives of the visiting company.

3. Eligibility

   Activities organized under this program must promote the development of companies in France and in Quebec, priority being assigned to activities likely to lead to industrial agreements for:
   - manufacturing under license;
   - the development of a process;
   - the sale or purchase of know-how;

- the co-manufacturing of a product;
- industrial development.

4. Procedure
   The company must file its project on a special form prepared by the Ministère. The application must be filed at least six weeks prior to the start of the activities.

7.3.1.6 - Invitation to Foreign Buyers

1. Objective
   This program is designed to promote and facilitate visits by foreign buyers in order to interest them in purchasing goods, services and technologies from Quebec.

2. Forms of Assistance
   The Ministère will cover the airfare for foreign visitors and may also organize visits of Quebec industries.

3. Eligibility
   Eligible for the program are: manufacturing or cultural industries, consulting firms and consortiums.

4. Procedure
   Applications are submitted directly to the Ministère.

7.3.1.7 - Trade Shows and Exhibitions Outside Quebec

1. Objective
   The Ministère offers a vast selection of trade shows and exhibitions outside of Quebec, to encourage the participation of groups of companies (manufacturing and cultural firms, consortiums, export agents representing Quebec firms) in national and international events that offer good market potential for products or services.

2. Forms of Assistance
   Among the activities promoted and organized by the Ministère, companies are invited to participate in major national and international trade shows held abroad. In addition to advice and technical services, the Ministère may grant companies financial assistance to cover part of the cost of building exhibits, advertising, issuing invitations, leasing space, and transporting samples. Participants are responsible for their own travel and accommodation costs.

3. Eligibility
   Eligible are: manufacturing or cultural industries, consulting firms, consortiums, export agents and trading firms duly representing Quebec companies.

4. Procedure
   The Ministère invites companies to apply to participate in trade shows outside Quebec according to the potential afforded by the external markets and selected economic sectors.

7.3.1.8 - Missions Outside Quebec

1. Objective
   The Ministère offers groups of companies a wide array of trade

missions outside Quebec in order to promote the sale of Quebec products and services abroad and to encourage the conclusion of industrial agreements (technological exchange agreements, manufacturing and sale agreements, joint ventures, etc.).

2. Forms of Assistance
   Among the activities set up and organized by the Ministère, companies are invited to participate in different trade missions or in missions oriented towards the conclusion of industrial agreements. In addition to technical and consulting services, the Ministère may offer financial aid to cover part of the costs of advertising, organizing the mission, and transporting samples and participants. The participants are responsible for their own travel expenses.

3. Eligibility
   Eligible are: manufacturing or cultural firms, consulting firms, consortiums, export agents and trading companies representing Quebec companies.

4. Procedure
   The Ministère invites companies to apply to participate in missions outside Quebec according to the potential of the external markets and the selected sectors of activity.

7.3.2 - The Société de développement industriel (SDI) Export Assistance Program

The SDI Export Assistance Program aims to help companies sell goods and services produced in Quebec outside the province. There are three parts to the program: identification and establishment on new markets, the financing of exports, and the creation of a consortium.

The program is open to any company, except financial institutions and companies in the primary sector, provided that they maintain their headquarters in Quebec and that at least 50% of their employees reside in Quebec. The projects submitted must be evaluated at no less than $100,000, except for those relating to software, software packages and electronic products for which the minimum project value is $50,000.

General eligibility criteria are as follows:

1. The company must demonstrate that its financial structure, its professional and technical personnel, the quality of its management and its production and marketing structure will ensure the project's success.

2. The company must also demonstrate that the project offers good prospects for profitability.

3. The company must not have taken on any contractual obligations connected with the eligible expenses, except if the application is for the creation of a consortium.

4. The company must demonstrate that the goods in question have a minimum 50% Quebec content or that the services in question are performed by residents of Quebec in a proportion of at least 50%.

7.3.2.1 - Part I: Identification and establishment on new markets

1. Objective

This part of the program provides financial assistance for companies planning to gain access and establish themselves on new markets outside Quebec. It also aims to support companies planning to introduce a new product on markets they already serve outside Quebec.

2. Forms and Modes of Financial Intervention

Financial intervention is a participative loan that can take the following forms:

- a) a generally unsecured loan for a maximum of eight years;
- b) interest that follows the market rate;
- c) a premium is requested as compensation for the risk incurred and generally takes the form of a participating stock option at book value when the loan is authorized or the interest rates go up;
- d) payment of capital and interest can be deferred for a maximum establishment period of three years. The interest will then be added to the capital.

Loan Amount

- The loan amount can reach a maximum of 50% of the eligible expenses. However, if the other government financial aid exceeds 30% of the eligible expenses, the difference is deducted from the maximum.
- The amount of a company loan may not exceed one million dollars or 75% of the net equity at the end of the company's last financial year, whichever is less.

Repayment Methods

Repayment shall be effected as follows:

- a) in the form of at least 3% in royalties, based on the sales connected with the project or the company's overall sales on the market or markets outside Quebec;
- b) over a maximum of five years after the establishment period.

Other Conditions

- The eligible company must pay the SDI a non-refundable management fee of 1% of the authorized loan amount, the moment the company agrees to the financial intervention.

3.Eligibility Criteria

- The company must have been operating for at least two years.
- The company must not have made any sales of significant value or volume on the prospective market, with respect to the product or products covered by the project.

Eligible Expenses

- 1. The cost of feasibility studies, legal fees, homologation fees and expertise.
- 2. Travel expenses.
- 3. The salaries of the professional staff specifically assigned to the project and posted outside Quebec.
- 4. The cost of the opening inventory, demonstrator models, samples or prototypes.
- 5. Leasing costs for warehouses, offices and equipment outside Quebec.
- 6. Advertising costs.
- 7. The cost of investing in a distribution network outside Quebec.
- 8. Any other expense directly connected with the project, upon approval by the SDI.

7.3.2.2 - Part II: The Financing of Exports

1. Objective

This part of the program aims to provide financial assistance to companies dealing in Quebec-made goods or services on external markets.

Services Available

The Financing of Exports offers a wide array of financial services including:

- interim financing;
- performance bonds for the project;
- supplementary term loans;
- discounts on receivables;
- letters of credit, etc.

2. Forms of Financial Intervention

Financial intervention in the financing of exports can take one or the other of the following forms:

- a) guaranteed payment or repayment of financial commitments subject to the payment of an administration fee of 1% of the authorized loan amounts;
- b) a loan at the market rate plus compensation according to the risk incurred.

3. Eligibility Criteria

- Financial intervention must be a necessity and must sup-

  - plement assistance from other financial institutions.
  - Loan security must be adequate.

7.3.2.3 - Part III: Creating Consortiums

1. Objective
   This part of the program aims to inspire companies to get together in order to sell Quebec-made goods or services on external markets.
   Definition of a Consortium
   A consortium consists of several companies that form a corporation. Financial organizations or government agencies may be members of a consortium but, together, may not hold a majority interest in the consortium.

2. Forms and Modes of Financial Intervention

   Forms of Financial Intervention
   Financial intervention includes venture capital and may take one or several of the following forms:
   - stock purchases;
   - shareholder's advances;
   - a loan convertible into stock;
   - guaranteed payment or repayment of a financial obligation, which does not imply joint and several liability.

   Modes of Financial Intervention
   a) Determine the role, rights and obligations of the individual.
   b) Ensure representation of the SDI on the company's board of directors.
   c) Define methods of withdrawal for the SDI.

3. Eligibility Criteria
   Companies wishing to benefit from financial intervention must establish the superiority of the consortium's potential results compared to those of the companies acting individually. The companies must also justify pooling their efforts and the need for the participation of the SDI.

4. The Aims of the Consortium
   The consortium must have one of the following aims:
   - 1. To provide integrated services (accounting, financing, purchasing, marketing, joint advertising, etc.).
   - 2. To be able to sell the goods or services (made in Quebec) of its shareholders as a non-participating representative or company.
   - 3. To handle the marketing and promotion for the goods and services of its shareholders, in the capacity of representative.
   - 4. To look after the advertising, public relations and information on external markets.

7.3.3 - The Federal Government's Export Market Development Program

The Export Market Development Program (EMDP) is a trade promotion program of the Canadian Department of External Affairs. The EMDP offers assistance to Canadian companies to enable them to participate in various types of export promotion activities or to undertake such activities. The EMDP covers projects implemented by industry and sponsored by government, and is designed to provide assistance for companies regardless of their size.

The EMDP is first and foremost designed to stimulate the growth of the economy by increasing export sales; the program achieves this by sharing the export costs with the companies. It also encourages exporters to introduce new products or to penetrate new markets.

The EMDP focuses on certain types of trade promotion and export marketing activities. More specifically, it aims to facilitate sales abroad by means of tours, trade missions, bids on foreign projects and the creation of export consortiums.

7.3.4 - The Export Development Corporation Programs

The Export Development Corporation (EDC) offers insurance and financing services for export sales. The Corporation grants credit insurance, performance bonds, as well as loans and loan guarantees to foreign buyers of Canadian goods and services.

7.4 - Conclusion

The analysis of commercial trading in Quebec reveals a heavy concentration of exports to the United States, especially New England, which is explained by the geographical proximity of this market as well as the high population density. While the United States will without a doubt remain our major trading partner for some time to come, it would be in Quebec's interests to diversify its export market; this would improve its trade balance. This objective, namely the diversification of its exports, could be achieved by making better and more frequent use of our international services and export assistance programs. In fact, the international services already play a major role in this respect, especially for small and medium-sized business; the services are high quality and the staff are able to direct and assist companies in their attempts to penetrate foreign markets. The Quebec Government also offers Quebec companies access to a number of financial and technical assistance programs which have proved to be valuable tools. In the coming years, Quebec's export sector will have to focus its efforts on further diversifying its buyers and its products, to ensure a choice position for Quebec on the international trade scene.

Chapter 8

Small and Medium-Sized Business in Words and Numbers

This final chapter presents a statistical portrait of small and medium-sized business (SMB). The content and layout are organized, as much as possible, to take into account the wishes expressed by representatives of business circles, the universities and the media at the consultation meetings held by the ministre délégué aux PME last spring.

8.1 - The General Context

The growth and progress of business, notably small and medium-sized business, are largely subject to world economic conditions. Quebec, as we know, has one of the most open economies in the world. Because of this, businesses in Quebec are widely exposed to the economic changes that occur at both the international and the North American or national level.

What is more, changes in government policies and practices, and amendments to laws and regulations are also likely to alter the environment in which businesses evolve and, especially, to condition the nature and form of decisions made by owners/managers of businesses.

8.1.1 - The Economic Environment

Generally speaking, the economic conditions that prevailed in 1986 and early 1987 encouraged the continued strong performance of Quebec's economy. In fact, the actual growth rates of the GDP in Canada and Quebec, while below the 1984 and 1985 rates, remain among the highest for industrialized nations. In 1986, the growth rates were estimated at 3.5% in Quebec and 3.3% in Canada compared to a world average of 2.7%. All this occurred without overly increasing consumer prices, which remained fairly stable.

Falling oil prices and declining interest rates are some of the factors that have most affected the progress of the international economic climate. Nevertheless, these decreases have not been sufficient to stimulate the world economy, whose growth rate remains relatively modest. What is more, inflation has remained moderate in most industrialized countries, notably because of the low market prices for commodities, and a slight increase in wages in a context where unemployment remains relatively high.

In the United States, the devaluation of the American dollar has made it impossible to reduce the trade deficit in any substantial way. In Japan, on the other hand, the corresponding increase in the value of the yen had an almost immediate impact on exports and economic growth. Some countries, whose currencies have not appreciated in value against the U.S. dollar, have continued to benefit from trading with the U.S., as have several newly industrialized countries.

What is more, the slow growth in world trading proved unfavourable to the heavily indebted countries which generally count on the influx of foreign currencies. While an agreement was concluded in 1986 between GATT member countries, concerning the priorities for the next round of negotiations, notably the issue of including agricultural products and the service sector, the protectionist actions have remained numerous, especially in the United States which began to take unilateral measures to resolve their trade deficit problems.

In 1986, Quebec maintained its solid economic performance. Like Canada, Quebec had one of the highest growth rates among industrialized nations that year. Thus in a context of slow growth for the world economy, estimated at under 3% in 1986, Quebec's actual gross domestic product was slightly higher than Canada's, namely a forecast rate of approximately 3.5%. The most dynamic components of demand were personal consumer goods and services and residential construction. Investments in non-residential construction, machinery and equipment also reported relatively strong growth, while international exports increased at a slower pace, compared to the components of domestic demand.

The climate of trust in the Quebec economy has favoured investments. In fact, Quebec's performance outdid the Canadian average in 1986, with a 7.4% increase in investment expenses. Moreover, the employment growth rate averaged approximately 2.2% in 1986. The unemployment rate continued to regress, to an average of 11% in 1986, compared to 11.8% in 1985 and 12.8% in 1984.

Prospects for 1987 point to a positive economic performance for Quebec, perhaps even surpassing the Canadian average. What is more, certain policies implemented by the Canadian government can be expected to impact Quebec's economic activity in the long run, notably the revision of federal taxation, the conclusion of a free trade agreement with the United States, and the renegotiation of the GATT agreements. Finally, deregulation and tax reform policies in the U.S. are also likely to influence Quebec's economic activity.

8.1.2 - Institutional Factors

The most important institutional factors for small and medium-sized business (SMB) have been the tax amendments, the changes made to the programs and mission of the regional support structures for SMB and, finally, the Conférence PME 1987 held last spring.

— Taxation

On a fiscal level, the changes proposed for the U.S. and Canada, and the tax and budget amendments this would imply for Quebec, are of major importance for SMB.

U.S. tax reforms were implemented in 1987 and it is estimated that these will reduce the personal tax burden by 120 billion dollars over the next 5 years, which reduction will be offset by an equivalent increase in the corporate tax burden.

In June 1987, federal Minister of Finance Michael Wilson tabled a tax reform plan in a White Paper entitled: "Tax Reform 1987". The plan specifically proposes a slight reduction in corporate tax rates and the elimination or reduction of various tax shelters. However, it also proposes maintaining tax incentives connected with research and development activities. As the White Paper indicates, the proposals will not modify the tax burden on small businesses.

In Quebec, budget and tax policies will therefore have to be coordinated with Canadian tax reform measures. The studies and work required to ensure this coordination are already underway so that, once it is passed, the federal reform will support Quebec's interests. What is more, in Quebec's last budget, the focus was already, among other things, on tax incentives for research and development, as well as on the financing of universities.

— The New Programs

The Government of Quebec, via the ministère de l'Industrie et du Commerce, has been engaged in a thorough review of the business assistance programs since the beginning of this budget year. The new series of programs reflects certain fundamental characteristics which are aimed at increasing the effectiveness of the business assistance measures, and offering forms of assistance that better meet the needs of business, while substantially decreasing its annual share of the budget funds.

This review of the programs is thus the result of efforts to streamline and simplify; consequently, the number of programs directly administered by the Société de développement industriel du Québec (SDI) has been reduced to four: investment assistance, export assistance, research and innovation assistance and last resort financing. What is more, the SDI continues to administer the Loi sur le crédit touristique.

Thus, the new programs have replaced the concept of traditional subsidies with that of shared risk with the entrepreneur.

These programs include methods that increase the incentive value of the assistance, by applying specific criteria for evaluating the risk of the project, the target markets and the company's financial ability to execute the project.

These include the possibility of improving the investment assistance for projects in outlying areas, as well as for projects in priority sectors.

They focus mainly on export and research and development projects.

Finally, according to the formula selected by the SDI, the new programs are financed in part out of a renewable assistance fund created from loan repayments, thus reducing the annual burden on the financial budgets.

– The Regionalization of Activities

In addition to their mission to assist in management, the regional branches of the ministère de l'Industrie et du Commerce have also been assigned new responsibilities, which allows them to supply various customer services, including the promotion of women and young entrepreneurs, the training of owners/managers of businesses, the start-up of new businesses, and the management of new programs.

– The Conférence PME 1987

In May 1987, at the instigation of the ministre délégué aux PME, the Conférence PME 1987 was held in Quebec City. The purpose of the conference was notably to bring together representatives of small and medium-sized business, in order to introduce them to a draft policy for the support and promotion of small and medium-sized business. The meeting was primarily an opportunity to present the measures that could be implemented to achieve this policy.

The ensuing discussions dealt with the various topics mentioned in the draft policy: document management, legislation and regulations, information, as well as promotion of the interests of small and medium-sized business. The discussion yielded a number of consensuses regarding these issues and these reflect the concerns and wishes of the representatives of business.

8.1.3 - Nature of SMB

– Selected Definitions

Readers will recall that, last year, when the first report by the ministre délégué aux PME was published, we had presented a wide, if only partial, array of definitions of SMB used by various organizations in Quebec, Canada and even the United States. We then summarized the elements of each of these definitions. We also underlined the problems that arise from such an abundance of definitions: their incompatibility and their impermanent nature, all of these definitions having been conceived under particular circumstances and for entirely specific purposes.

In order to reduce the problems arising from this situation, especially on a statistical level, we suggested two definitions of SMB: one applicable to the manufacturing sector, another applicable to sectors other than manufacturing. We think it would be useful to repeat these definitions. The tables that follow describe the standards that were set for the manufacturing sector (Table 8.1), and for other than manufacturing sectors (Table 8.2). The suggested definitions could help resolve certain problems connected with the implementation of a valid database on business, especially SMB.

Table 8.1
Suggested Definition and Classification of Companies In the Manufacturing Sector By Number of Employees and Value of Assets Quebec

Number of Employees	Value of Assets	Type of Business
0-49	Under $3,000,000	Small
50-199	$3,000,000 to $12,000,000	Medium-Sized
200-499	$12,000,000 to $30,000,000	Large
500 and up	$30,000,000 and up	Very Large

Source: Rapport du ministre délégué aux PME, Quebec, 1986.

Table 8.2
Suggested Definition and Classification of Companies in Sectors Other Than Manufacturing By Number of Employees and Annual Sales Volume Quebec

Number of Employees	Annual Sales	Type of Business
Under 50	Under $2,000,000	Small
50-99	$2,000,000 to $20,000,000	Medium-Sized
Over 100	Over $20,000,000	Large

Source: Rapport du ministre délégué aux PME, Quebec, 1986.

However, for the moment, there are still no uniform definitions of SMB, whether for purposes of enforcing the law, administering programs, or compiling statistics. Consequently, the definitions used in this chapter vary according to the different aspects under discussion. In fact, we are in this respect dependent on the methods of presenting and classifiying data selected by the organizations[1] whose statistical reports we used as a basic reference.

---

[1] Statistics Canada, Bureau de la statistique du Québec, ministère du Revenu du Québec, etc.

In fact, when we discuss the number of SMB, and their distribution according to sector of activity and region, we are defining as SMB companies in the manufacturing sector with fewer than 200 employees, whereas in other sectors, these companies have fewer than 100 employees.

In the section on income, SMB are companies in the manufacturing sector with under 12 million dollars in assets, while in other sectors, they are companies with a business volume of less than 20 million dollars.

In the section dealing with the percentages and variations in employment, and in the one that presents the demographic profile of the employees of SMB, the available statistics impose a definition of SMB as companies with fewer than 100 employees, for all sectors including the manufacturing sector.

In the section dealing with SMB in the manufacturing sector, the latter are defined as companies with fewer than 200 employees and whose added value is below an annually indexed threshold.

Finally, in the sections dealing with self-employed workers and cooperatives, the issue is entirely different. The self-employed worker is defined as any person who files an income statement in Quebec, and whose income stems mainly from work performed on his/her own account. Part of this chapter is devoted to cooperatives because, by their nature, they represent a specific type of business.

– Sources of Data

Consistent with last year's publication, the present chapter deals with the following aspects of SMB: their number, their income and their jobs. Here too, the manufacturing sector is discussed in a separate section. Finally, because of the nature and form of the available data, self-employed workers and cooperatives are also discussed in different sections. In order to facilitate reference to the basic data, we have indicated the information sources that were used in dealing with the above aspects of SMB.

Regarding the number of SMB, the data is estimated from statistics compiled by the Commission de la santé et de la sécurité du travail (CSST), the ministère du Revenu du Québec, and the Fichier central des entreprises.

With respect to income, information was provided by the ministère du Revenu du Québec and pertains to 1984. The data is drawn from the corporate tax statistics.

The data on employment was provided by Statistics Canada. It is drawn from specially compiled statistics on job creation by size of business. The data used in the demographic profile of employees was drawn from a study conducted by Statistics Canada as part a pan-Canadian statistical project on small business.

The Bureau de la statistique du Québec publication "Statistiques des PME manufacturières au Québec" was used as a source of information on the manufacturing sector.

The information on self-employed workers comes from the personal tax statistics of the ministère du Revenu du Québec.

Finally, the data on cooperatives was provided by the ministère de l'Industrie et du Commerce, Direction des coopératives.

8.2 - The Economic Importance of Small and Medium-Sized Business

8.2.1 - The Relative Weight of SMB in the Economy

— The Number of SMB

In 1987, there were close to 158,800 SMB in Quebec, out of a total of 159,800 active corporations, thus accounting for 99.3% of the whole, as in 1986. The rise in the number of active corporations (4,800) in 1987 represents a 3.1% increase over 1986 (Table 8.12).

This shift is essentially attributable to the increase in the number of SMB (Table 8.3). More specifically, the number of small businesses increased by 4,796 in 1987, accounting for over 99% of this increase. The number of medium-sized businesses rose only

Table 8.3
Number of Corporations
Annual Variation
According to Size and Sector of Activity
Quebec
1986 to 1987

Sectors	Small	Medium-Sized	Large	Total
Primary	446	5	-3	448
Secondary	431	2	-17	416
Tertiary	3 919	12	13	3 944
Total	**4 796**	**19**	**-7**	**4 808**

Source: Table 8.13

slightly (19). Finally, large companies recorded a very slight drop (7).

– Distribution of SMB According to Sector of Activity

The distribution of SMB according to sector of activity in 1987 has changed somewhat compared to 1986. An increase was observed in the primary and tertiary sectors, while the secondary sector reported a decrease.

In 1987, 3.6% of SMB were in the primary sector, as opposed to 3.5% in 1986. Similarly, the proportion of SMB in the tertiary sector went from 75.1% in 1986 to 75.3% this year. On the other hand, the percentage of SMB in the secondary sector declined, from 21.4% to 21.1% over the same period (Table 8.4).

In the case of big business, only the tertiary sector has shown an increase. In 1987, this sector accounted for 65.5% of big business, as opposed to 63.8% in 1986. The primary and secondary sectors recorded drops, respectively from 4.8% to 4.5% and from 31.4% to 30.0% (Table 8.4).

Even though 99% of the increase in the number of active corporations was due to SMB, especially small business, the relative proportion of SMB in each sector of activity in 1987 has remained significantly unchanged from 1986 (Table 8.14).

– Distribution of SMB According to Region

Four regions account for more than 85% of the increase in the number of SMB, namely Montreal (48.8%), Quebec (22.1.%), St. Maurice/Bois-Francs (8.5%) and the Lower St.Lawrence/Gaspé/Magdalen Islands region (6.0%) (Table 8.5).

Table 8.4

Number of SMB and Large Companies
Breakdown (%) by Sector
Quebec, 1986 and 1987

	SMB %		Large Companies %	
	1986	**1987**	**1986**	**1987**
Primary	3.5	3.6	4.8	4.5
Secondary	21.4	21.1	31.4	30.
Tertiary	75.1	75.3	63.8	65.5
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Table 8.13

Table 8.5
Number of SMB
Absolute and Relative Variations
By Administrative Region
Quebec
1986 to 1987

Region	**No.**	**Variations** **In Numbers**	**In %**
Lower St.Lawrence/Gaspé Magdalen Islands	(01)	290	6.0
Saguenay/Lac-Saint-Jean	(02)	183	3.8
Quebec	(03)	1 063	22.1
St.Maurice/Bois-Francs	(04)	408	8.5
Eastern Townships	(05)	138	2.9
Montreal	(06)	2 353	48.8
Outaouais	(07)	155	3.2
Abitibi-Témiscamingue	(08)	140	2.9
North Shore and New Quebec	(09) (10)	85	1.8
Total		**4 815**	**100.0**

Source: Table 8.15

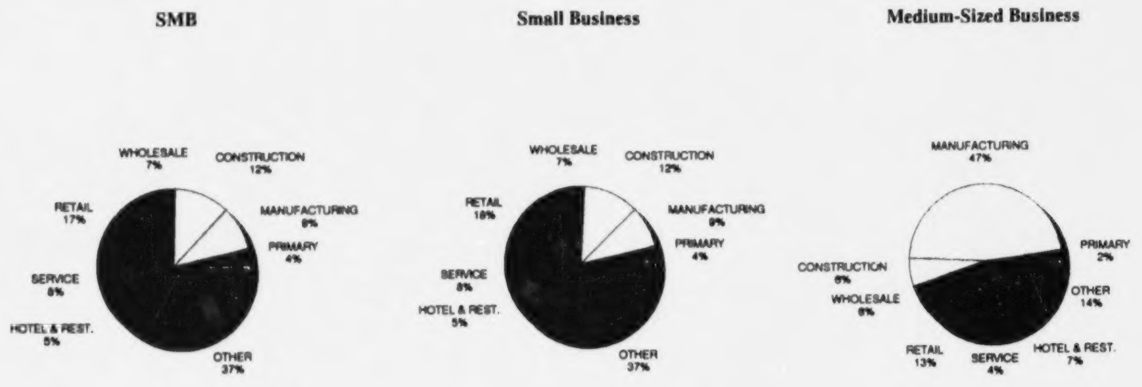
Regarding the relative growth in the number of SMB per region, the Lower St. Lawrence/Gaspé/Magdalen Islands region recorded the largest increase, with 8.1% (7.8% of all active corporations), followed by the North Shore and New Quebec, with 5.5%. The Montreal area presented the smallest relative growth rate at 2.3% (Table 8.15).

As for the breakdown of SMB by economic sector, according to administrative region, we have noted that, in the primary sector, 60.8% of all SMB are concentrated in the Quebec and Montreal areas, leaving fewer than 40% in the other regions, with only 4.0% in the Outaouais, North Shore and New Quebec regions combined. In the secondary and tertiary sectors, the Montreal and Quebec areas account for over 80% of the total SMB (Table 8.16 and Graph 8.2). This just goes to show the preponderant role played by these two regions in the economy of the SMB.

Finally, even if the breakdown of SMB according to administrative region changes little, it is interesting to note

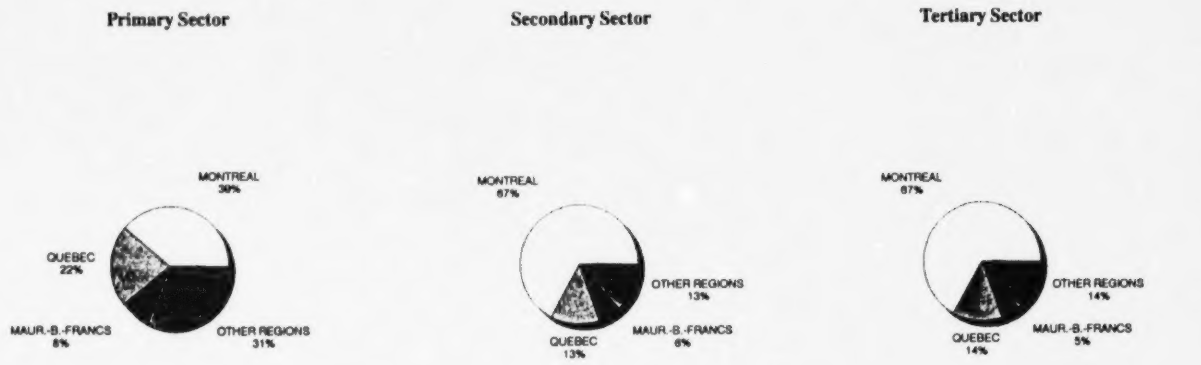
Graph 8.1

Number of SMB
Breakdown in Percentage
By Sector of Activity
Quebec, 1987



Source: Table 8.13

Graph 8.2
Number of SMB
Breakdown by Sector of Activity
According to Administrative Region
Quebec, 1987



Source: Table 8.16

that the percentage of SMB in the Montreal area in 1987 has declined compared to 1986 (65.8% against 66.3%), while it increased in the Quebec area (13.9% against 13.7%) and in other regions (20.3% against 20.0%) (Table 8.15).

– The Income of SMB

In 1984, the percentage of SMB that reported income earned in Quebec, compared to the overall number of corporations, was almost unchanged from 1983 (98.5% against 98.6%). However, the percentage of income declared by these SMB, compared to the overall income declared by all corporations, totalled 44.8%, a three-point drop from the previous period. This relative decrease in the declared income of SMB can be ascribed to the fact that 70% of the overall increase in declared income in 1984 (30.4 billion dollars) was reported by big business (Table 8.6).

Table 8.6
Corporate Income
Absolute and Relative Variations
According to Size and Sector of Activity
Quebec, 1983 to 1984

Size **Sector**	**SMB**	**Large Companies**	**Total**
Primary			
$000 000	180	4 179	4 359
%	*2.0*	*19.5*	*14.4*
%	**4.1**	**95.9**	**100.0**
Secondary			
$000 000	2 513	9 509	12 022
%	*27.9*	*44.6*	*39.6*
%	**20.9**	**79.1**	**100.0**
Tertiary			
$000 000	6 328	7 655	13 983
%	*70.1*	*35.3*	*46.0*
%	**45.3**	**54.7**	**100.0**
Total			
$000 000	9 021	21 343	30 364
%	*100.0*	*100.0*	*100.0*
%	**29.7**	**70.3**	**100.0**

Source: Table 8.18

In absolute terms, the income of SMB increased by 9 billion dollars in 1984, to 80.1 billion dollars, a 12.7% increase over 1983. 70% of the increase came from SMB in the tertiary sector, 28% from the secondary sector, and only 2% from SMB in the primary sector. With respect to the distribution of the increase among large companies, the differences are smaller, a preponderance of companies being from the secondary sector (44.6%) followed by the tertiary sector (35.9%), and finally, the primary sector (19.5%) (Table 8.6).

If we compare 1984 to 1983, the percentage of income reported by SMB declined substantially in the primary sector, from 27.3% to 18.6%, while it dipped slightly in the secondary sector (from 42.7% to 38.5%) and remained stable at around 52% in the tertiary sector (Table 8.19).

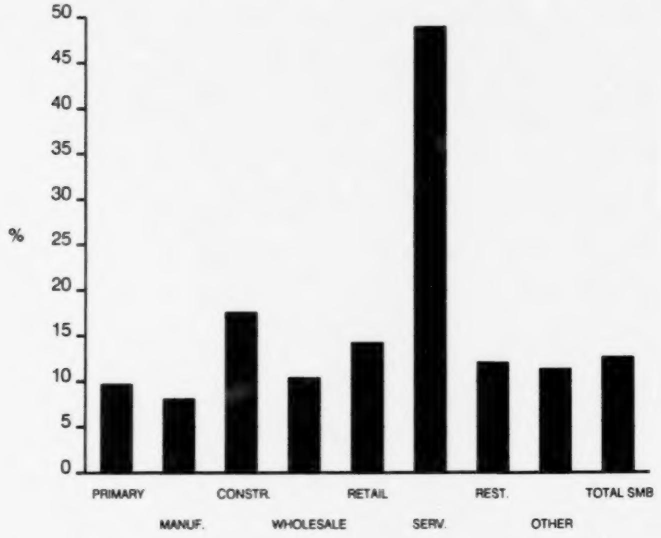
This situation is the result of the combined interplay of several factors. First of all, although the breakdown (in percentage) of the number of SMB according to sector of activity and the relative proportion of SMB (in numbers) in these sectors remained unchanged from 1983 to 1984, the SMB's portion of the increase in the declared income of corporations was very low in the primary sector (4%), average in the secondary sector (21%) and fairly large in the tertiary sector (45%) (Table 8.6). Moreover, the percentage of the declared income of large companies in the primary sector in 1984 rose markedly from 1983 (from 6.1% to 9.0%), even though the proportion of large companies in the primary sector has dropped in comparison to the overall number of large companies (2.2% against 3.4%) (Table 8.19). An analogous phenomenon was observed in the secondary sector, although to a lesser degree. Finally, in the tertiary sector, in spite of a relatively strong increase in the percentage of large companies (59.9% in 1984 against 55.6% in 1983), the percentage of the income from these companies dropped, compared to the income of large companies as a whole (52.6% in 1983, 49.0% in 1984).

The poor performance of SMB in the primary sector and the relative vigour of those in the tertiary sector, combined with the strength of the large companies in the primary sector and their relatively weakened position in the tertiary sector, explain at least in part the backsliding of SMB in the primary sector and their stability in the tertiary sector.

Of course, the absence of a sufficiently lengthy set of statistics and the lack of appropriate means of verifying available data prevents us from drawing any definite conclusions on the causes of the phenomenons that we have observed. Nevertheless, if we may be so bold, the relative success of SMB in the tertiary sector could be attributed to such factors as appropriate training for owners/managers of businesses, the use of better qualified workers, recourse to modern technology, access to all types of support services (public or private), the proper organization of these com-

Graph 8.3

Income Earned by SMB
Annual Variation
According to Sector of Activity
Quebec, 1983 to 1984



Source: Table 8.17

panies (management employees and production employees) and, finally, the specialization of these firms. Evidently, these are merely hypotheses that only surveys and specific studies will either confirm or invalidate.

– Percentages and Variations in Employment

In 1985, 947,100 jobs were reported in SMB (under 100 employees)[2] in Quebec (Table 8.23), namely an increase of 69,300 jobs over 1984 (+7.3%). SMB are therefore responsible for 89.5% of the increase in total employment between 1984 and 1985 (Table 8.7).

For comparison purposes, in Canada, the number of jobs in SMB grew by 8.2% over the same period. What is more, SMB are responsible for 78.2% of the total increase in employment (Tables 8.26 to 8.29).

The proportion of total employment attributed to SMB in the private sector[3] in 1985 shows a slight increase over 1984, from 39.7% to 41.1% (Table 8.8). Over the same period, the proportion of employment ascribed to SMB in the tertiary sector reveals a slight increase (40.4% to 41.5%), a relatively significant increase in the secondary sector (37.2% to 39.6%) and, finally, a significant increase in the primary sector (42.3% to 47.5%). Nevertheless, these variations are not sufficiently large to modify the breakdown of jobs per sector of activity, which remains pretty well identical to the 1984 rates.

If we consider variations in employment from a more long-term standpoint, it becomes obvious that SMB play a major role in job creation.

For instance, between 1978 and 1985[4], the number of jobs in the private sector rose from 2,145,500 to 2,289,000, a net variation[5] of 143,500 jobs (Table 8.23). This net variation is the result, on the one hand, of a net increase of 228,300 jobs in SMB and, on the other hand, a net loss of 84,800 jobs (-6.2% compared to 1978) in big business.

Small companies (fewer than 50 employees) play a decisive role in this respect. In fact, the net increase of 228,300 jobs in SMB is essentially attributable to a net increase of 243,000 jobs in small business (39.8%) between 1978 and 1985. Over the same period,

---

[2] Because of the nature and presentation of the available data regarding employment, small and medium-sized business (SMB) are defined as companies with fewer than 100 employees, including those in the manufacturing sector. See selected definitions.

[3] This data excludes public service jobs

[4] This data is from an analysis based on longitudinal statistics, which considers variations in employment by size of business, according to changes caused by the movement of businesses from one size classification to another. Full results of this study are discussed in Chapter 2.

[5] This net variation takes into account the creation of disappearance of jobs resulting from the start-up or closure of companies, or from companies with increasing or decreasing employment.

Table 8.7
Total Employment
Absolute and Relative Variations
According to Size of Business
Quebec
1984 to 1985

Year		SMB	Large Companies	Total
1984		877 800	1 333 800	2 211 600
1985		947 100	1 341 900	2 289 000
Variation:	Number	69 300	8 100	77 400
	%	7.3	0.6	3.5
Breakdown % of Variation		89.5	10.5	100.0

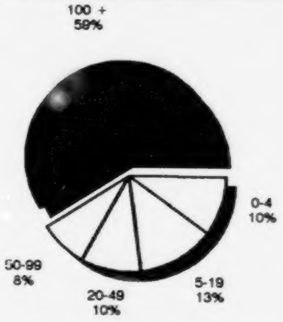
Source: Table 8.24

Table 8.8
Total Employment
Breakdown by Sector of Activity
According to Size of Business
Quebec
1984 and 1985

	SMB		Large Companies		Total	
Sector	**1984**	**1985**	**1984**	**1985**	**1984**	**1985**
	%		%		%	
Primary	42.3	47.5	57.7	52.5	100.0	100.0
Secondary	37.2	39.6	62.8	60.4	100.0	100.0
Tertiary	40.4	41.5	59.6	58.5	100.0	100.0
Total	**39.7**	**41.1**	**60.3**	**58.9**	**100.0**	**100.0**

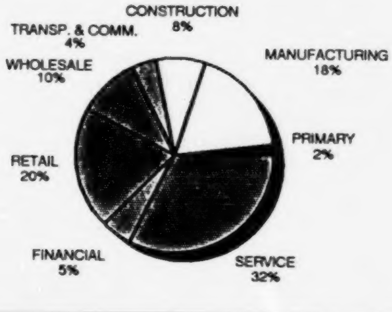
Source: Table 8.22

Graph 8.4
Total Employment
Breakdown in Percentage
According to Size of Business
Quebec, 1985



Source: Table 8.20

Graph 8.5
Employment in SMB
Breakdown in Percentage
According to Sector of Activity
Quebec, 1985



Source: Table 8.21

medium-sized companies on the other hand reported a net decrease of 14,700 jobs (-8.7%).

Furthermore, if we consider the fact that SMB (under 100 employees) suffered a net loss of 60,000 jobs to big business (100 employees or more) as a result of the reclassification of certain SMB and large companies, owing to increases or decreases in their staff, as applicable, it is easy to understand how SMB play a totally dominant role in job creation, especially small businesses.

It has also been observed that the net variation in employment in SMB is positive in all sectors of activity, with the service and retail sectors showing the largest increases (Graph 8.6).

Finally, the wages paid by SMB rose from 15.0 billion dollars in 1984 to 16.8 billion dollars in 1985, a 12.1% increase (7.0% for all companies). The proportion of the total wages paid by SMB therefore increased, from 34.2% to 35.8% over the same period. An increase in the SMB's share of the overall wages paid, by sector of activity, was also observed (Table 8.11).

8.2.2 - SMB in the Manufacturing Sector

— Changes in Principal Variables

From 1982 to 1984, the number of SMB in the manufacturing sector increased by close to 300, to slightly over 9,700 establishments, or a 2.9% increase over this period. The relative proportion of SMB in the sector fell slightly however, from 91.5% to 91.2%.

In 1984, manufacturing SMB accounted for some 163,400 production jobs, an increase of over 10,000 jobs (6.7%) compared to 1982 (3.9% for the entire sector). SMB's share of employment in this sector therefore increased by 1.2 percentage points, to 46.0%. While there was an absolute increase in wages (15.7%), in the value of manufacturing shipments (15.7%), and in the added value (17.0%) between 1982 and 1984, SMB's relative share in terms of these variables dropped very slightly in the case of wages (35.9% to 35.8%), and the value of manufacturing shipments (28.3% to 28.2%) and, more markedly, with respect to the added value (30.6% to 28.6%) (Table 8.30).

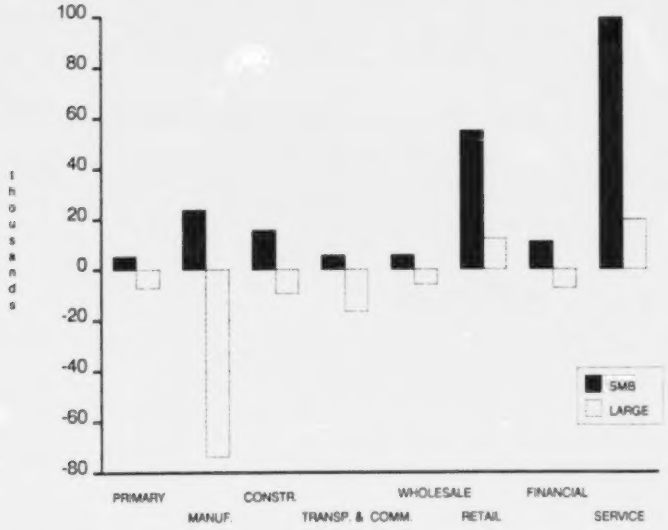
— Small and Medium-Sized Business by Industrial Group

If we consider the importance of these variables according to industrial group, we will observe that, in 1985, small and medium-sized businesses (SMB) in 6 industries dominated the manufacturing sector, with 64.3% of the employees, 62.4% of the production wages, 60.8% of the manufacturing shipments, and 58.9% of the added value. This situation corresponds significantly to the situation that prevailed in 1984 (Table 8.9)

Between 1982 and 1985, the industries that displayed the best average annual growth in terms of the number of production employees were the wood (9.3%), machinery (except electrical)

Graph 8.6

Total Employment
Net Variations by Size of Business
According to Sector of Activity
Quebec, 1978 to 198



Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.9
Employees, Wages, Added Value and Value of Shipments by SMB
Breakdown According to Major Manufacturing Industries
Quebec
1984 and 1985

	Employees		Wages		Value of Manufacturing Shipments		Added Value	
	1984 %	1985 %	1984 %	1985 %	1984 %	1985 %	1984 %	1985 %
Food	7.4	7.3	7.8	7.6	18.5	17.9	8.9	8.7
Garment	25.6	25.4	20.3	20.2	14.6	14.2	16.5	15.7
Wood	9.1	9.3	9.1	9.4	8.3	8.5	8.3	8.4
Furniture and accessories	5.9	6.0	5.8	6.1	4.2	4.6	5.3	5.7
Printing, publishing and related industries	7.0	6.9	8.3	8.3	6.8	6.8	9.3	9.2
Metal products	9.1	9.4	10.7	10.8	8.1	8.8	9.8	11.2
Total	**64.1**	**64.3**	**62.0**	**62.4**	**60.5**	**60.8**	**58.1**	**58.9**

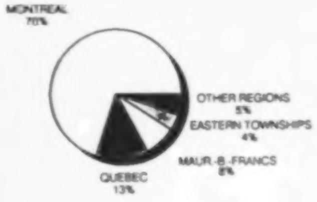
Source: Table 8.31

(8.0%), and transportation equipment (5.9%) sectors. On the other hand, the leather and related products industries recorded the largest drop at -6.3% (Table 8.32). With respect to the added value, the wood (17.0%), tobacco (15.3%) and machinery (12.1%) industries showed the highest average annual increases. From this standpoint, the leather and related products industries also recorded the poorest results, namely -5.7%, the only group of industries to show a decrease (Table 8.32).

– Manufacturing SMB by Region

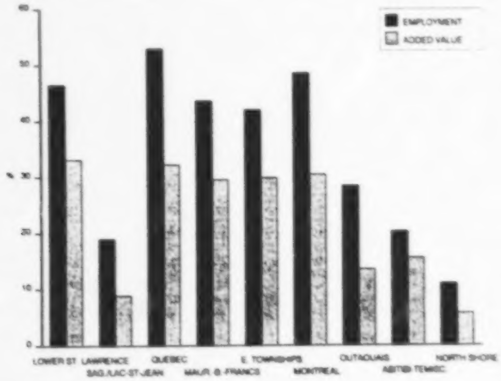
In 1984, 81% of the small and medium-sized businesses (SMB) in the manufacturing sector were located in the Montreal and Quebec regions. They accounted for over 81% of employees. The SMB in these two areas paid close to 85% of the wages in the manufacturing sector. The value of their manufacturing shipments exceeded 82% of the sector total. Finally, the SMB in these regions are responsible for close to 85% of the added value in the manufacturing sector. Once again, the data reveals the enormous impact these two regions have on the economy of SMB.

Graph 8.7
Employment in Manufacturing SMBs
Breakdown in Percentage
According to Administrative Region
Quebec, 1984



Source: Table 8.33

Graph 8.8
Manufacturing SMBs
Relative Proportion of Overall Manufacturing Sector
According to Administrative Region
Quebec, 1984



Source: Table 8.33

From 1982 to 1984, most regions reported a fairly marked decline in the number of SMBs in the manufacturing sector. This was notably the case in the North Shore and New Quebec regions (Table 8.33) where, in spite of an increase in the proportion of small and medium-sized establishments (78.8% in 1982 compared to 84.6% in 1984), the relative share of employees in SMBs declined from 13.8% to 11.0%, while salaries went from 8.9% to 6.3% and the value of manufacturing shipments and added value from 9.0% and 11.7%, to 5.7% in both cases. In the Trois-Rivières region, the decline was also substantial. The SMB's share in terms of the number of production employees and salaries went from 44.8% and 36.4% respectively in 1982, to 43.7% and 33.2% in 1984. The value of shipments and the added value of SMB dropped from 34.6% and 33.4% to 30.2% and 29.6% of the manufacturing sector total for the same period. To a lesser extent, the following areas also recorded a drop: Lower St. Lawrence/Gaspé/Magdalen Islands, Quebec, Montreal and Abitibi-Témiscamingue.

Moreover, an increase has also been observed in SMB's relative share of the overall manufacturing production, in the Saguenay/Lac-St-Jean, Outaouais and Eastern Townships regions. In the latter case, from 1982 to 1984, SMB's share of the number of employees went from 37.9% to 42.1%, while production wages increased from 30.7% to 33.8%. With respect to the value of manufacturing shipments and added value, SMB accounted for 29.8% and 29.9% of the sector total in 1984, compared with 29.4% and 26.9% in 1982.

8.2.3.- Demographic Profile of SMB Employees

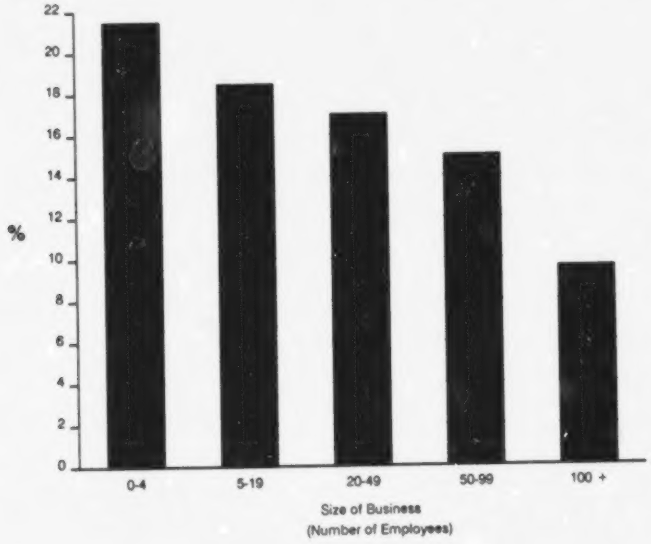
– Young People in SMB

In 1984, there were some 285,000 workers between 15 and 24 years of age in Quebec. While they represented 13% of all employees, they accounted for 18.1% of the workers in SMB and only 9.6% of the employees in large companies. In short, the observation was that the smaller the company, the larger the proportion of jobs held by young people (Graph 8.9). SMB employ slightly more than 159,000 young workers, or 55.8% of all workers in this age group. In the case of older workers (25 years old and up), the proportion is 37.8%. The number of workers under 25 years of age in large companies was some 126,000 or 44.2% of the total. In comparison, 62.2% of the workers over age 25 work for big business.

Another difference was also observed, this time in connection with the breakdown of workers in SMB by sector of activity. 2.5% of the young workers are employed in the primary sector (1.8% of all workers), 20.3% in the secondary sector (25.9% of the total) and 75.9% in the tertiary sector (72.3% of the total).

On the other hand, close to two thirds of the young workers are employed in two sub-sectors of the tertiary sector, namely 26.3% in the retail trade (20.7%

Graph 8.9
Total Employment
Percentage of Jobs Held by Young People (ages 15 to 24)
According to Size of Business
Quebec, 1984



Source: Table 8.34

of the total) and 36.3% in service industries (32.0% of all workers). Finally, while young workers represent 18% of the total SMB employees (Table 8.35), they account for more than 20% of the labour force in three sectors: the primary industries (26.8%), the retail trade (22.7%) and the service industry (20.7%).

– Women in SMB

In 1984, SMB in Quebec employed some 305,300 women, which is slightly over a third (34.7%) of the total number of employees in SMB (Table 8.37). The proportion of women in big business is somewhat higher at 34.9%, whereas in all companies, 34.8% or 762,500 jobs are held by women (Table 8.36). A relatively more marked difference is observed between the proportion of jobs held by women in medium-sized companies (32.7%) and in small companies (35.2%). In this last group, it was observed that the smaller the company, the larger the proportion of jobs held by women, who accounted for 42.7% of employment in companies with under 4 employees (Table 8.36).

With respect to the breakdown by sector of activity, it was noted that fewer than 1% of the jobs held by women in SMB are in the primary sector, while slightly over 16% are in the secondary sector, and close to 82% are in the tertiary sector. What is more, two industries in the tertiary sector account for close to two thirds of the jobs held by women, namely the service industries (45.9%) and the retail trade (20.3%).

Finally, it was observed that the proportion of jobs held by women in SMB increases as we go from the primary to the secondary to the tertiary sectors. Thus, 16.9% of jobs in the primary sector are held by women (5.3% in big business); the proportion is 22.3% in the secondary sector (18.6% in big business), and in the area of 39.3% in the tertiary sector (42.4% in big business). Thus, the proportion of jobs held by women in SMB and in big business in the secondary and tertiary sectors is substantially the same. In the case of the primary sector, the difference between SMB and big business is far more obvious in this respect, because of the very small proportion of jobs held by women in big business (Table 8.37).

8.2.4 - Self-Employed Workers[6]

– Proportion and Income of Self-Employed Workers

In 1985, there were close to 197,900 self-employed workers in Quebec, up 5,800 (3.0%) over the 192,100 reported in 1982. This increase is essentially the result of a change in the number of self-employed workers in the liberal professions, which grew by over 6,000 or 19.4% during this period. What is

---

[6] By self-employed worker is meant any person who files an income statement in Quebec and whose income is derived mainly from work performed on his/her own account.

Table 8.10
Number and Income of Self-Employed Workers
Absolute and Relative Variations
Quebec
1982 to 1985

Professions	Number		Income	
	Unit	%	$000	%
Farmers	-287	-4.9	64 911	7.7
Fishermen	-456	-7.9	-1 536	-0.2
Liberal Professions	6 055	104.3	446 430	53.3
Commission Salesmen	465	8.0	37 216	4.4
Business Owners	26	0.5	291 726	34.8
Total	**5 803**	**100.0**	**838 747**	**100.0**

Source: Table 8.38

more, the increase in the number of commission salesmen and the number of business owners was almost entirely offset by the losses suffered by farmers and fishermen. In spite of these changes, the relative proportion of self-employed workers, by profession, in 1985, remained almost unchanged in the case of fishermen and commission salesmen. However, the proportion does change slightly in the case of business owners (from 60.7% to 59.0%), and especially in the liberal professions (from 16.2% to 18.8%) (Table 8.38).

The income of self-employed workers went from 3.5 billion dollars in 1982 to 4.4 billion dollars in 1985, an increase of 25.7%. Only the fishermen reported a drop from 1982 (4.4%). On the other hand, the liberal professions recorded an increase of over 31% for the same period. Also, only this last group increased its relative share of the overall income of self-employed workers, from 39.5% to 42.1%.

– Regional Breakdown

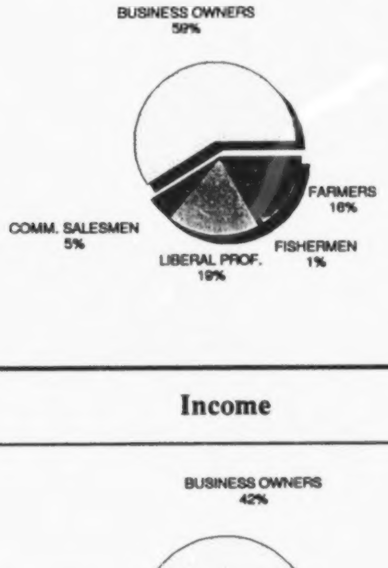
In terms of the regional breakdown, only the St. Maurice/Bois-Francs (4.9%), Montreal (1.1%) and Outaouais (11.6%) regions showed absolute increases in the number of self-employed workers. Consequently, the other regions recorded drops in the relative proportion of self-employed workers compared to the total.

While the number of self-employed workers in the liberal professions increased in all areas of Quebec in 1985, compared to 1982, and the number of

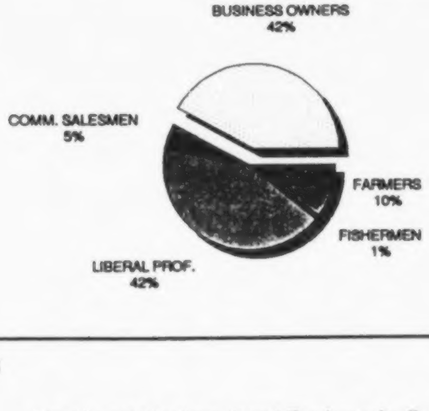
Graph 8.10

Number and Total Income of Self-Employed Workers
Breakdown in Percentage
According to Profession
Quebec, 1985

Number



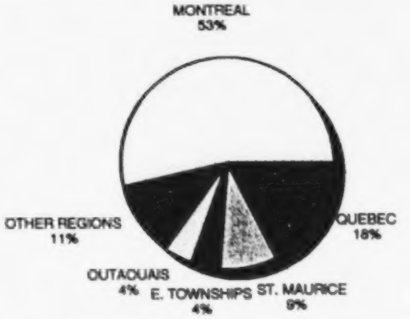
Income



Source: Table 8.38

Graph 8.11

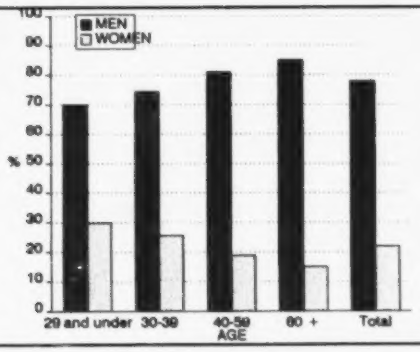
Self-Employed Workers
Breakdown in Percentage
By Administrative Region
Quebec, 1985



Source: Table 8.39

Graph 8.12

Self-Employed Workers
Breakdown in Percentage by Age and by Sex
Quebec, 1985



Source: Table 8.42

fishermen declined across the board, increases in the number of farmers were observed for the same period in only the Montreal, Outaouais, North Shore and New Quebec regions. On the other hand, the number of self-employed workers in the commission salesmen category only dropped in the following regions: Lower St. Lawrence/Gaspé/Magdalen Islands, Quebec and Abitibi-Témiscamingue.

— Socio-Economic Characteristics

The decreased number of self-employed workers is essentially due to the drop in numbers in the farmers', fishermen's and business owners' groups, in the under $10,000 income bracket. Furthermore, although the income of self-employed workers has increased overall, drops in income were observed for all professions in the under $10,000 income bracket. Increases were reported for all professions in all income brackets between 1982 and 1985, except for the liberal professions in the $25,000 to $50,000 income bracket, and farmers in the $50,000 to $100,000 bracket.

What is more, it was noted that 53.4% of the women in the self-employed category are under 40 years old, whereas only 40.8% of men in the self-employed category are under 40 (Table 8.42).

Finally, women represent about 10% of the overall number of self-employed workers in the fishermen and farmers categories, whereas the rate is close to 22% in the liberal professions and close to 25% in the case of commission salesmen and business owners (Table 8.42).

8.2.5 - Cooperatives

— Changes in Principal Variables

In 1986, there were 1,373 financial cooperatives in Quebec. These represent close to 4,250,000 owner-members, or close to 90% of the total membership in financial and non-financial cooperatives. Their assets totalled 25.9 billion dollars (over 95% of the cooperative total) and their income was valued at 2.7 billion dollars (44.9% of the total) (Table 8.43).

As at December 31, 1985, the 982 non-financial cooperatives that filed an annual report comprised some 481,000 members. Their total assets were valued at 1.2 billion dollars, or close to 5% of the total for all cooperatives, and they reported an income of approximately 3.3 billion dollars (55.1% of the total for all cooperatives).

— Breakdown by Cooperative Sector

There are 725 cooperatives in the consumer cooperative sector (73.8% of all non-financial cooperatives). They represent over 429,000 members (89.2% of all members), and account for 31.7% of the total assets and 10.6% of the total sales for all non-financial cooperatives.

In 1985, there were 151 producers' cooperatives, or 15.4% of all non-financial cooperatives[7]. These 151 producers' cooperatives accounted for 9.4% of all member-owners of cooperatives of this type, and accounted for 62.8% of all assets and 82.6% of all sales for all non-financial cooperatives.

Finally, workers' cooperatives account for 8.6% of all non-financial cooperatives. They represent 0.9% of all members, own 5.5% of all assets and record 3.1% of all sales by non-financial cooperatives.

– Regional Breakdown

In 1986, the Montreal area reported 789 non-financial cooperatives and the Quebec area 447, for a total of 1,236 non-financial cooperatives in both regions. These cooperatives therefore represent 63.8% of all non-financial cooperatives, or slightly less than the percentage of SMB in these two regions.

In the case of financial cooperatives, these same two regions account for 60.8% of the total for this type of cooperative, with 36.3% in the Montreal area and 24.5% in the Quebec area in 1987.

The other financial and non-financial cooperatives are fairly evenly divided among the other regions.

We can therefore conclude that the Montreal and Quebec areas account for close to two thirds of the various categories of cooperatives.

8.3 - Growth of SMB

8.3.1. - Trends

According to the various factors discussed, the economic impact of SMB seems to have increased over the periods under consideration, with respect to the number of corporations, the number of employees and their wages, but has decreased with regard to income (Table 8.11).

In terms of income, in spite of the increase, in absolute terms, in the income of SMB in all sectors, a decrease has been observed in their share of the total income for all corporations. This relative decline is largely due to the drop in the relative percentage of the income recorded by SMB in the primary sector, and to a lesser degree, to the decrease in the percentage of income recorded by SMB in the manufacturing sector.

As for the proportion of the number of corporations represented by SMB, the figure has remained stable overall, with a slight gain in the primary and secondary sectors.

In terms of the number of employees, the proportion employed by SMB is growing compared to the overall cor-

---

[7] These are the cooperatives that filed an annual report as at December 31, 1985.

Table 8.11
SMB Based on Certain Variables
Absolute and Relative Variations
By Sector of Activity
Quebec
1983, 1984, 1985, 1986 and 1987 (if available)

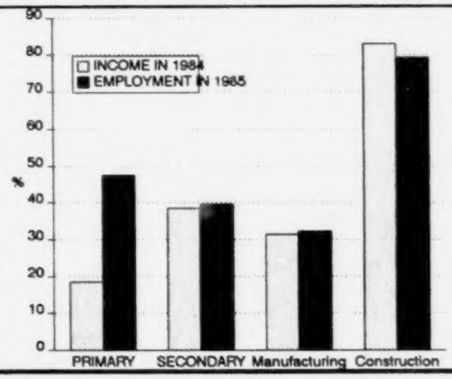
	Primary Sector			Secondary Sector			Tertiary Sector		
	Year	Year	Var. in %	Year	Year	Var. in %	Year	Year	Var. in %
Number of Corporations	1986	1987		1986	1987		1986	1987	
SMB	5 320	5 771	8.5	32 990	33 423	1.3	115 640	119 571	3.4
Total	5 370	5 818	8.3	33 320	33 736	1.2	116 310	120 254	3.4
SMB/Total (%)	99.1	99.2		99.0	99.1		99.4	99.4	
Income (in millions of $)	1983	1984		1983	1984		1983	1984	
SMB	1 857	2 037	9.7	23 479	25 992	10.7	45 770	52 097	13.8
Total	6 571	10 930	66.3	55 482	67 504	21.7	86 603	100 586	16.1
SMB/Total (%)	28.3	18.6		42.3	38.5		52.9	51.8	
Number of Employees	1984	1985		1984	1985		1984	1985	
SMB	16 600	18 400	10.9	224 300	243 800	8.7	631 600	674 900	6.9
Total	39 100	38 700	(1.0)	602 300	615 300	2.2	1 564 400	1 624 400	3.8
SMB/Total (%)	42.4	47.5		37.2	39.6		40.4	41.5	
Wages (in millions of $)	1984	1985		1984	1985		1984	1985	
SMB	386	420	8.8	4 744	5 345	12.7	9 880	11 054	11.9
Total	1 077	1 121	4.1	13 758	14 634	6.4	29 047	31 205	7.4
SMB/total (%)	35.8	37.5		34.5	36.5		34.0	35.4	

Source: Compiled by the Direction des études sectorielles, DGRP, MIC, 1987.

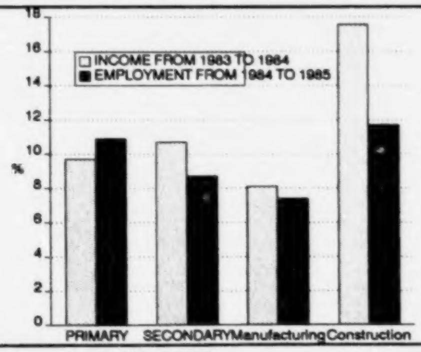
Graph 8.13

SMB in the Primary and Secondary Sectors
Relative Proportions of Employment and Income
By Sector of Activity
Quebec, 1984 and 1985

Income and Employment by Sector



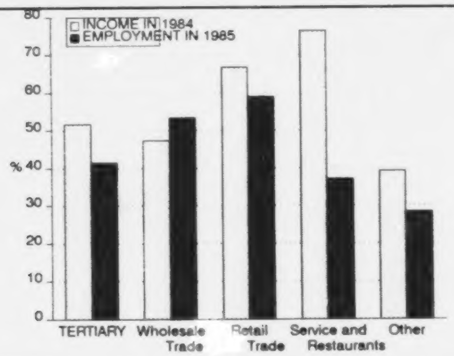
Annual Variations



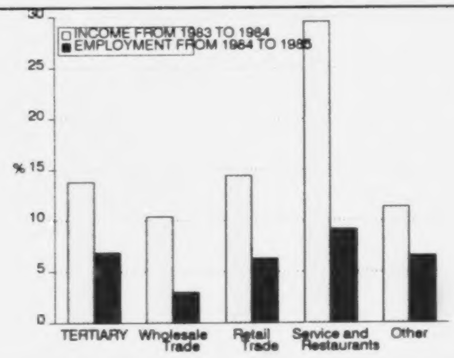
Sources: ministère du Revenu du Québec, 1987.
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.

Graph 8.14
SMB in the Tertiary Sector
Relative Proportions of Employment and Income by Sector of Activity
Quebec, 1984 and 1985

Income and Employment by Sector



Annual Variations



Sources: ministère du Revenu du Québec, 1987

Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.

porations in each sector, with an especially significant increase in the primary sector.

Finally, the proportion of wages paid by SMB is increasing in all sectors of activity, especially in the primary sector.

8.3.2 - Performance Indexes

In the context of the work done preparatory to the publication of the second report by the ministre délégué aux PME, consultations were held last spring with representatives of the business world, universities and the media. On this occasion, the latter requested a clearer illustration of the statistical portion of this second publication. The many graphs in this chapter are therefore provided in an attempt to meet this expectation.

It is therefore in the same optic and in accordance with the commitment made by the ministre délégué aux PME that certain indexes on the health or performance of SMB have been provided. The purpose of these indexes is to increase the visual impact of the figures describing the position and growth of small and medium-sized businesses.

The selected indexes correspond to the following economic indicators: employment[8], the creation of companies, and the number of business bankruptcies[9].

Similar indicators have been used by the U.S. Small Business Administration to form a combined index. As mentioned earlier, Quebec does not currently have sufficiently long or detailed sets of statistics on SMB, or appropriate mechanisms for statistically verifying the available data, or econometric studies that would enable us to weigh the basic indicators. This is why a similar combination index is for the moment impossible.

Nevertheless, the use of separate indexes allows us to illustrate the economic conditions under which SMB operate, and the level of vitality of these companies. Each of the indexes has been calculated annually, with 1980 as the base year, and covers the period from 1980 to 1986, except for employment, where the period ends in 1985.

According to the proposed indexes (Graph 8.15), we were able to observe that the unfavourable economic conditions that persisted between 1980 and 1982 yielded a drop in the vitality of owners/managers of SMB. Subsequently, an improvement in these economic conditions led to a renewed

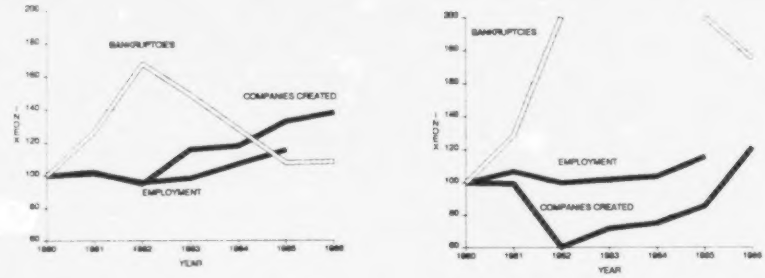
---

[8] Because of the nature and the presentation of the available data on employment, we are defining SMB as companies with fewer than 100 employees; this includes companies in the manufacturing sector. See the selected definitions.

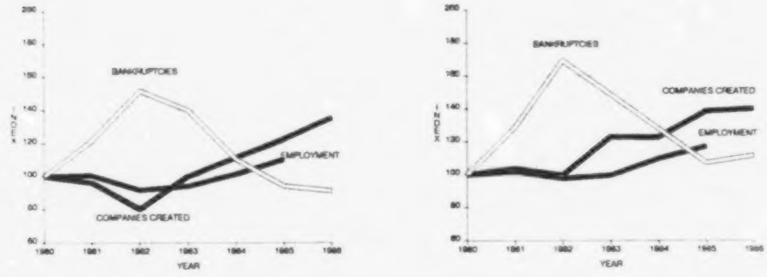
[9] The data on employment was provided by Statistics Canada, while the data on business creation was drawn from statistics on new incorporations provided by the Fichier central des entreprises; finally, the data on the number of business bankruptcies was supplied by Consumer and Corporate Affairs Canada.

Graph 8.15
SMB Performance Indexes (1980 = 100)
Quebec, 1980 to 1986

All Sectors Primary



Secondary Tertiary



Compiled by the Direction des études sectorielles, DGRP, MIC.

vitality on the part of these same owners/managers.

Thus, a considerable increase was noted in the number of SMB bankruptcies between 1980 and 1982, and the bankruptcy index at the end of the period was 167.7 (1980 = 100). On the other hand, a progressive decrease in the number of bankruptcies was observed as of 1982, and the index gradually returned to normal, reaching a ratio of 108.5 in 1986.

With respect to the creation of businesses, we noted that the number of incorporations dropped between 1980 and 1982, leaving the index at 95.0 in 1982. It then climbed back up to 138.1 in 1986. Of course the fluctuations are not as large as they are in terms of bankruptcies, but they nevertheless reflect the same realities. Finally, as far as the index relating to number of employees is concerned, it first dropped to 96.0 in 1982 and then climbed gradually back up to 115.6 in 1985.

Finally, we have noted that the fluctuations in each of the indexes are essentially the same for all sectors of activity, with only slight changes in amplitude from sector to sector. Thus, the amplitude of the fluctuations is the greatest in the primary sector, in terms of bankruptcies, with the index totalling 252.5 in 1982 (1980 = 100), and in terms of the creation of business, where the ratio was 60.3 in 1982. The amplitude of the fluctuations in employment was strongest in the secondary sector, with the index totalling 91.7 in 1982. Finally, the global indexes for all sectors combined were most closely matched by the tertiary sector, in terms of minimum and maximum index levels and their trends.

8.3.3- Developments

— The Problem with Data

The publication of the annual report on the status of SMB and therefore the need to evaluate the position and progress of SMB have encountered numerous difficulties, not the least being the issue of the data. In fact, we have had to deal with the lack of a sufficiently lengthy set of statistics or of systematic mechanisms for the proper verification of available data, as well as the lack of consistency between the various sources of data.

These problems were discussed last year in the report by the ministre délégué aux PME. Correcting these kinds of shortcomings requires money and effort, but especially a great deal of time. Nevertheless, certain decisions have already been made in this respect. For instance, talks are underway between the representatives of the ministère de l'Industrie et du Commerce and the Bureau de la statistique du Québec, in order to build a valid database on SMB. Moreover, in response to requests made by the federal and provincial ministers responsible for SMB, a pan-Canadian project involving the federal level, the provinces and the territories, is being set up to gather statistics on small business. Although the onset of the work was somewhat delayed, the projected three-year program is now well underway. The Government of Quebec, whose financial contribution and representation is ensured by the ministère de l'Industrie et du Commerce, is participating actively in the support and follow-up of this project.

– The Conférence PME 1987

Readers will recall that, at the Conférence PME 1987 held last May, which brought together representatives of business and government, the proceedings focused on four major themes: the management of documents, legislation and regulations, information, and promotion of the interests of SMB. The participants achieved a certain number of consensuses on these themes.

On the issue of document management, participants considered it a priority to reduce government paperwork and agreed to entrust the ministre délégué aux PME with the responsibility of coordinating the review of the documentation of the various government ministries and agencies.

With regard to legislation and regulations, participants decided to adopt an incentive approach to cleaning up and streamlining the legislation and regulations, by means of a light and flexible structure. This would all take place according to a process that will integrate the expertise of those in the field and would extend to companies of all sizes. To this effect, the participants agreed that there was a need to:

- publish a twice yearly agenda of legislative bills and regulations;
- add a sunset clause to the laws and regulations adopted in future;
- commission the government ministries and agencies to perform studies on the economic impact of legislative bills and regulations;
- coordinate regulations to coincide with the legislation;
- draw up a calendar for reviewing the laws and regulations that affect SMB.

With respect to information, a certain number of means were selected to improve the exchange of information between the owners/managers of small and medium-sized business and the government:

- a single access point for government services to business;
- a data bank on SMB;
- an annual report on the activities of the ministre délégué aux PME.

Finally, with respect to promoting the interests of SMB, it was decided that the ministre délégué aux PME would be the promoter of the interests of SMB both within the government and externally, in accordance with priorities identified in the basic guidelines adopted at the Conférence PME in 1987.

— Final Remarks

Ultimately, the interest displayed by the Government of Quebec with respect to the activities and future of companies, especially SMB, resides in the fact that the latter play a decisive role in the development of the economy. In this respect, the efforts made by the Government of Quebec are aimed not only at achieving recognition of the primacy of this role but also at providing businesses with all the tools they require to realize this objective. Furthermore, the government is responsible for creating, maintaining and improving the conditions essential to the companies' performance of their fundamental role with respect to economic growth. The government intends to carry out this task of promotion and support on behalf of the young people, women and men in business, as well as the various associations which, through their efforts, initiative and vitality, are contributing to the emergence and expression of Quebec's know-how in all fields of economic activity.

Publication of this report on the status and development of small and medium-sized business represents one of many tangible ways in which the Government of Quebec can acknowledge and support the contribution made by entrepreneurs to the continued well-being of Quebecers.

8.4 - Statistical Supplement

Table 8.12
Total Number of Small and Medium-Sized Businesses (SMB) and Active Corporations
Breakdown by Sector of Activity
Quebec
1986 and 1987

	SMB			TOTAL CORPORATIONS			SMB/TOTAL CORPORATIONS	
	NUMBER		% VAR.	NUMBER		% VAR.	1986	1987
	1986	1987	87 / 86	1986	1987	87 / 86	%	%
Primary Sector - Total	5,320	5,771	8.5	5,370	5,818	8.3	99.1	99.2
Secondary Sector - Total	32,990	33,423	1.3	33,320	33,736	1.2	99.0	99.1
Manufacturing industries	15,110	14,847	-1.7	15,370	15,091	-1.8	98.3	98.4
Construction	17,880	18,576	3.9	17,950	18,645	3.9	99.6	99.6
Tertiary sector - Total	115,640	119,571	3.4	116,310	120,254	3.4	99.4	99.4
Wholesale trade	12,030	11,843	-1.6	12,130	11,939	-1.6	99.2	99.2
Retail trade	27,470	27,724	0.9	27,610	27,871	0.9	99.5	99.5
Business services	12,400	13,058	5.3	12,520	13,172	5.2	99.0	99.1
Hotel and restaurant	7,700	8,205	6.6	7,800	8,307	6.5	98.7	98.8
Other (1)	56,040	58,741	3.1	56,260	58,965	4.8	99.6	99.6
Grand Total	153,950	158,765	3.1	155,000	159,808	3.1	99.3	99.3

(1): This category includes the following subsectors:

Transportation and storage
Communications and utilities
Financial intermediaries and insurance
Real estate services and insurance agents
Educational services
Health services and social services
Other services

Sources:

Sources for the total number of corporations are the CSST and the ministère du Revenu du Québec.
The sector percentages are based on Fichier central des entreprises data.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.13
Number and Percentage of Active Corporations
Breakdown and Annual Variation According to Size and Sector of Activity
Quebec
1986 and 1987

Sector of Activity	Small		Medium		Large		Total		Small	Medium	Large	Total
	1986	1987	1986	1987	1986	1987	1986	1987	1987\86	1987\86	1987\86	1987\86
	In Numbers								Variation in Numbers			
Primary Sector - Total	5 270	5,716	50	55	50	47	5,370	5,818	446	5	-3	448
Secondary Sector - Total	31,630	32,061	1,360	1,362	330	313	33,320	33,736	431	2	-17	416
Manufacturing industries	13,890	13,636	1,220	1,211	260	244	15,390	15,091	-254	-9	-16	-279
Construction	17,740	18,425	140	151	70	69	17,950	18,645	685	11	-1	695
Tertiary Sector - Total	114,510	118,429	1,130	1,142	670	683	116,310	120,254	3,919	12	13	3,944
Wholesale trade	11,850	11,691	180	152	100	96	12,130	11,939	-159	-28	-4	-191
Retail trade	27,160	27,384	310	340	140	147	27,610	27,871	224	30	7	261
Business services	12,290	12,953	110	105	110	116	12,510	13,172	663	-5	4	662
Hotel and restaurant	7,510	8,018	190	187	100	102	7,800	8,307	508	-3	2	507
Other	55,700	58,383	340	358	220	224	56,260	58,965	2,683	18	4	2,705
Grand Total	151,410	156,206	2,540	2,559	1,050	1043	155,000	159,808	4,796 99.7%	19 0.4%	-7 (0.1%)	4,808 100.0%
	In percentage											
Primary Sector - Total	3.5	3.7	1.9	2.1	5.0	4.5	3.5	3.6				
Secondary Sector - Total	20.9	20.5	53.7	53.2	31.5	30.0	21.5	21.1				
Manufacturing industries	9.2	8.7	48.1	47.3	24.7	23.4	9.9	9.4				
Construction	11.7	11.8	5.6	5.9	6.8	6.6	11.6	11.7				
Tertiary Sector - Total	75.6	75.8	44.4	44.6	63.5	65.5	75.0	75.2				
Wholesale trade	7.8	7.5	7.0	5.9	9.1	9.2	7.8	7.5				
Retail trade	17.9	17.5	12.1	13.3	13.5	14.1	17.8	17.4				
Business services	8.1	8.3	4.5	4.1	10.6	10.9	8.1	8.2				
Hotel and restaurant	5.0	5.1	7.3	7.3	9.2	9.8	5.0	5.2				
Other	36.8	37.4	13.5	14.0	21.1	21.5	36.3	36.9				
Grand Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0				

(1) In the case of small and medium-sized businesses (SMB), this category includes the following subsectors according to the percentages (%) indicated:

	1986	1987
Transportation and storage	3.8	4.0
Communications and utilities	0.6	0.7
Financial intermediaries and insura	16.0	16.4
Real estate services and insurance	7.6	7.6
Educational services	0.3	0.3
Health services and social services	0.9	1.0
Other services	7.1	7.0
Total	36.3	37.0

Sources:
Sources for the total number of corporations are the CSST and the ministère du Revenu du Québec.
The sector percentages are based on Fichier central des entreprises data.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.14
Number of Active Corporations
Absolute and Relative Breakdown
According to Size and Sector of Activity
Quebec
1986 and 1987

YEAR	Sector of Activity	NUMBER Small	NUMBER Medium	NUMBER Large	TOTAL	PERCENTAGE Small %	PERCENTAGE Medium %	PERCENTAGE Large %	TOTAL %
1986	Primary Sector - Total	5,270	50	50	5,370	98.1	0.9	1.0	100.0
	Secondary Sector - Total	31,630	1,360	330	33,320	94.9	4.1	1.0	100.0
	Manufacturing industries	13,890	1,220	260	15,370	90.4	7.9	1.7	100.0
	Construction	17,740	140	70	17,950	98.8	0.8	0.4	100.0
	Tertiary Sector - Total	114,510	1,130	670	116,310	98.4	1.0	0.6	100.0
	Wholesale trade	11,850	180	100	12,130	97.7	1.5	0.8	100.0
	Retail trade	27,160	310	140	27,610	98.4	1.1	0.5	100.0
	Business services	12,290	110	110	12,510	98.2	0.9	0.9	100.0
	Hotel and restaurant	7,510	190	100	7,800	96.4	2.4	1.2	100.0
	Other	55,700	340	220	56,260	99.0	0.6	0.4	100.0
	Grand Total	151,410	2,540	1050	155,000	97.7	1.6	0.7	100.0
1987	Primary Sector - Total	5,716	55	47	5,818	98.2	1.0	0.8	100.0
	Secondary Sector - Total	32,061	1,362	313	33,736	95.0	4.0	1.0	100.0
	Manufacturing industries	13,636	1,211	244	15,091	90.4	8.0	1.6	100.0
	Construction	18,425	151	69	18,645	98.8	0.8	0.4	100.0
	Tertiary Sector - Total	118,429	1,142	683	120,254	98.5	0.9	0.6	100.0
	Wholesale trade	11,691	152	96	11,939	97.9	1.3	0.8	100.0
	Retail trade	27,384	340	147	27,871	98.2	1.3	0.5	100.0
	Business services	12,953	105	114	13,172	98.3	0.8	0.9	100.0
	Hotel and restaurant	8,018	187	102	8,307	96.5	2.3	1.2	100.0
	Other	58,383	358	224	58,965	99.0	0.6	0.4	100.0
	Grand Total	156,206	2,559	1,043	159,808	97.7	1.6	0.7	100.0

Sources:

Sources for the total number of corporations are the CSST and the ministère du Revenu du Québec.
The sector percentages are based on Fichier central des entreprises data.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.15
Number of Active Corporations and Small and Medium-Sized Businesses (SMB)
Absolute and Relative Breakdown
According to Administrative Region
Quebec
1986 and 1987

	SMB					Corporations				
	1986		1987		Var. 86/87	1986		1987		Var. 86/87
	Number	%	Number	%	%	Number	%	Number	%	%
Lower St-Lawrence/Gaspé/ Magdalen Islands	3,580	2.3	3,870	2.4	8.1	3,600	2.3	3,880	2.4	7.8
Saguenay/Lac-St-Jean	5,170	3.4	5,353	3.4	3.5	5,190	3.3	5,377	3.4	3.6
Quebec	21,040	13.7	22,103	13.9	5.1	21,190	13.7	22,265	13.9	5.1
Mauricie/Bois-Francs	8,400	5.5	8,808	5.5	4.9	8,430	5.4	8,843	5.5	4.9
Eastern Townships	5,190	3.4	5,328	3.4	2.7	5,210	3.4	5,345	3.3	2.6
Montreal	102,260	66.3	104,613	65.9	2.3	103,030	66.5	105,376	65.9	2.3
Outaouais	3,740	2.4	3,895	2.5	4.1	3,750	2.4	3,905	2.4	4.1
Abitibi-Témiscamingue	3,030	2.0	3,170	2.0	4.6	3,050	2.0	3,182	2.0	4.3
North Shore and New Quebec	1,540	1.0	1,625	1.0	5.5	1,550	1.0	1,635	1.0	5.5
Grand Total	153,950	100.0	158,765	100.0	3.1	155,000	100.0	159,808	100.0	3.1

Sources:
Sources for the total number of corporations are the CSST and the ministère du Revenu du Québec.
The sector percentages are based on Fichier central des entreprises data.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.16

Number of Active Corporations and Small and Medium-Sized Businesses (SMB)

Absolute and Relative Breakdown by Sector

According to Administrative Region

Quebec

1987

	Primary Sector			Secondary Sector			Tertiary Sector		
	Total	SMB	% by Region	Total	SMB	% by Region	Total	SMB	% by Region
Lower St-Lawrence/Gaspé/ Magdalen Islands	387	384	6,7	685	684	2,0	2 808	2 802	2,3
Saguenay/Lac-St-Jean	470	464	8,0	953	947	2,8	3 954	3 942	3,3
Quebec	1 286	1 269	22,0	4 555	4 514	13,5	16 424	16 320	13,6
Mauricie/Bois-Francs	487	482	8,4	2 127	2 115	6,3	6 229	6 211	5,2
Eastern townships	321	320	5,5	1 144	1 138	3,4	3 880	3 870	3,2
Montreal	2 249	2 242	38,8	22 653	22 416	67,1	80 474	79 955	66,9
Outaouais	154	153	2,7	933	931	2,8	2 818	2 811	2,4
Abitibi-Témiscamingue	380	375	6,5	423	415	1,2	2 379	2 380	2,0
North Shore and New Quebec	84	82	1,4	263	263	0,8	1 288	1 280	1,1
Grand Total	5 818	5 771	100,0	33 736	33 423	100,0	120 254	119 571	100,0

Sources:
Sources for the total number of corporations are the CSST and the ministère du Revenu du Québec.
The sector percentages are based on Fichier central des entreprises data.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.17
Small and Medium-Sized Businesses (SMB) Declaring Income in Quebec
Number and Value of Income
By Sector of Activity
Quebec
1983 and 1984

Sector	SMB				INCOME			
	1983		1984		1983		1984	
	NUMBER	%	NUMBER	%	000 000 $	%	000 000 $	%
Primary Sector - Total	3 914	3,6	4 134	3,7	1 857	2,6	2 037	2,5
Secondary Sector - Total	23 498	21,4	22 821	20,2	23 479	33,0	25 992	32,4
Manufacturing industries	11 817	10,8	10 627	9,4	16 951	23,8	18 318	22,9
Construction	11 681	10,6	12 194	10,8	6 528	9,2	7 674	9,6
Tertiary Sector - Total	82 489	75,0	86 089	76,1	45 770	64,4	52 097	65,1
Wholesale trade	9 152	8,3	9 477	8,4	10 955	15,4	12 097	15,1
Retail Trade	20 507	18,7	21 388	18,9	17 247	24,3	19 723	24,6
Business services	7 043	6,4	8 277	7,3	1 842	2,6	2 745	3,4
Hotel and restaurant	5 432	4,9	6 203	5,5	2 034	2,9	2 280	2,8
Other	40 355	36,7	40 744	36,0	13 692	19,2	15 252	19,0
Total SMB	109 901	100,0	113 044	100,0	71 106	100,0	80 126	100,0
Total SMB / Corporations (%)		98,6		98,5		47,8		44,8

Note:
Businesses whose sector of activity is undetermined and whose data is confidential have been excluded.

Source:
Ministère du Revenu du Québec, 1987.
Compiled by The Direction des études sectorielles, DGRP, MIC.

Table 8.18
Active Corporations Declaring Income Earned in Quebec
Breakdown of Income by Amount and Percentage
According to Size and Sector of Activity
Quebec
1983 and 1984

	Small		Medium		Large		Total	
	1983	1984	1983	1984	1983	1984	1983	1984
	in millions of $							
Primary Sector · Total	1,108	1,132	749	905	4,714	8,893	6,571	10,930
Secondary Sector · Total	13,538	13,811	9,941	12,181	32,003	41,512	55,482	67,504
Manufacturing industries	10,021	9,696	6,930	8,622	30,292	39,955	47,243	58,273
Construction	3,517	4,115	3,011	3,559	1,711	1,557	8,239	9,231
Tertiary Sector · Total	21,347	23,320	24,423	28,778	40,833	48,488	86,603	100,586
Wholesale trade	3,094	3,239	7,861	8,858	16,747	13,408	27,702	25,505
Retail trade	7,706	8,387	9,541	11,337	6,303	9,851	23,550	29,575
Business services	1,198	1,601	644	1,144	647	1,050	2,489	3,795
Hotel and restaurant	1,495	1,759	539	521	460	502	2,494	2,782
Other	7,854	8,334	5,838	6,918	16,676	23,677	30,368	38,929
Grand Total	35,993	38,263	35,113	41,864	77,550	98,893	148,656	179,020
Breakdown in %	%	%	%	%	%	%	%	%
Primary Sector · Total	3.1	3.0	2.1	2.2	6.1	9.0	4.4	6.1
Secondary Sector · Total	37.6	36.1	28.3	26.6	41.3	42.0	37.3	37.7
Manufacturing industries	27.8	25.3	19.7	18.8	39.1	40.4	31.8	32.6
Construction	9.8	10.8	8.6	7.8	2.2	1.6	5.5	5.2
Tertiary Sector · Total	59.3	60.9	69.6	62.8	52.7	49.0	58.3	56.2
Wholesale trade	8.6	8.5	22.4	19.3	21.6	13.6	18.6	14.2
Retail trade	21.4	21.9	27.2	26.7	8.1	10.0	15.8	16.5
Business services	3.3	4.2	1.8	2.5	0.8	1.1	1.7	2.1
Hotel and restaurant	4.2	4.6	1.5	1.1	0.6	0.5	1.7	1.6
Other	21.8	21.8	16.6	16.5	21.5	23.9	20.4	21.7
Grand Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Businesses whose sector of activity is undetermined and whose data is confidential have been excluded.

Source:
Ministère du Revenu du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.19
Active Corporations Declaring Income Earned in Quebec
Breakdown by Number and Income
According to Size and Sector of Activity
Quebec
1983 and 1984

	1983						1984					
	SMB		Large		Total		SMB		Large		Total	
	Number %	Income %	Number %	Income %	Number %	Income %	Number %	Income %	Number %	Income %	Number %	Income %
Primary Sector · Total	98,7	27,3	1,3	72,7	100,0	100,0	99,0	18,6	1,0	81,4	100,0	100,0
Secondary Sector · Total	97,4	42,2	2,6	57,8	100,0	100 0	96,9	38,5	3,1	61,5	100,0	100,0
Manufacturing industries	95,2	35,7	4,8	64,3	100,0	100,0	94,0	31,4	6,0	68,6	100,0	100,0
Construction	99,6	79,1	0,4	20,9	100,0	100,0	99,5	83,1	0,5	16,9	100,0	100,0
Tertiary Sector · Total	99,0	52,1	1,0	47,9	100,0	100,0	98,9	51,8	1,1	48,2	100,0	100,0
Wholesale trade	96,5	39,5	3,5	60,5	100,0	100,0	96,4	47,4	3,6	52,6	100,0	100,0
Retail trade	99,4	73,0	0,6	27,0	100,0	100,0	99,3	66,7	0,7	33,3	100,0	100,0
Business services	99,5	73,3	0,5	26,7	100,0	100,0	99,5	72,3	0,5	27,7	100,0	100,0
Hotel and restaurant	99,6	80,7	0,4	19,3	100,0	100,0	99,7	82,0	0,3	18,0	100,0	100,0
Other	99,1	43,4	0,9	56,6	100,0	100,0	99,1	39,2	0,9	60,8	100,0	100,0
Grand Total	98,6	47,2	1,4	52,8	100,0	100,0	98,5	44,8	1,5	55,2	100,0	100,0
Breakdown in %	%	%	%	%	%	%	%	%	%	%	%	%
Primary Sector · Total	3,6	2,6	3,4	6,1	3,6	4,4	3,7	2,5	2,2	9,0	3,6	6,1
Secondary Sector · Total	21,4	33,0	41,0	41,3	21,6	37,3	20,2	32,4	38,3	42,0	20,5	37,7
Manufacturing industries	10,8	23,8	38,1	39,1	11,1	31,8	9,4	22,9	35,3	40,4	9,8	32,6
Construction	10,6	9,2	2,9	2,2	10,5	5,5	10,8	9,6	3,0	1,6	10,7	5,1
Tertiary Sector · Total	75,0	64,4	55,6	52,6	74,8	58,3	76,1	65,1	59,5	49,0	75,7	56,2
Wholesale trade	8,3	15,4	21,4	21,6	8,5	18,6	8,4	15,1	18,5	13,6	8,6	14,2
Retail trade	18,7	24,3	8,2	8,1	18,5	15,8	18,9	24,6	8,3	10,0	18,7	16,5
Business services	6,4	2,6	2,1	0,8	6,4	1,7	7,3	3,4	2,1	1,1	7,2	2,1
Hotel and restaurant	4,9	2,9	1,3	0,6	4,9	1,7	5,5	2,8	0,9	0,5	5,4	1,6
Other	36,7	19,2	22,6	21,5	36,5	20,3	36,0	19,0	29,7	23,8	35,8	21,7
Grand Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Note: Businesses whose sector of activity is undetermined and whose data is confidential have been excluded.
Source:
Ministère du Revenu du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.20
Number of Employees by Sector of Activity
According to Size of Business
Quebec
1985 (1)

	TOTAL	SMB	LARGE	Size of Business Based on Employment			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
Primary Sector	38,700	18,400	20,300	16,500	1,900	3,900	16,400
Agriculture, forestry and fisheries	15,600	14,400	1,200	13,100	1,300	700	500
Mines	23,100	4,000	19,100	3,400	600	3,200	15,900
Secondary Sector	615,300	243,800	371,500	182,300	61,500	134,500	237,000
Manufacturing industries	517,600	166,300	351,300	114,500	51,800	121,400	229,900
Construction	97,700	77,500	20,200	67,800	9,700	13,100	7,100
Tertiary Sector	1,624,400	674,900	949,500	559,500	115,400	250,400	699,100
Transportation, communications, etc.	171,400	40,000	131,400	33,300	6,700	13,500	117,900
Wholesale trade	170,900	91,200	79,700	73,700	17,500	25,600	54,100
Retail trade	324,300	191,200	133,100	165,700	25,500	25,000	108,100
Finance	141,900	49,000	92,900	42,100	6,900	15,000	77,900
Services	815,900	303,500	512,400	244,700	58,800	171,300	341,100
Unclassified	10,600	10,000	600	9,900	100	500	100
Total (2)	2,289,000	947,100	1,341,900	768,200	178,900	389,300	952,600

(1) : The above data is based on the jobs declared by businesses in 1985 but according to their size in 1984; the resulting difference was deemed insignificant.

(2) : Excludes public service jobs.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.21
Number of Employees by Sector of Activity
Breakdown in Percentage
According to Size of Business
Quebec
1985 (1)

	TOTAL	SME	LARGE	Size of Business Based on Employment			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
Primary Sector	1.7	2.0	1.5	2.2	1.1	1.0	1.7
Agriculture, forestry and fisheries	0.7	1.5	0.1	1.7	0.7	0.2	0.1
Mines	1.0	0.4	1.4	0.4	0.3	0.8	1.7
Secondary Sector	27.0	26.0	27.7	24.0	34.4	34.6	24.9
Manufacturing industries	22.7	17.7	26.2	15.1	29.0	31.2	24.1
Construction	4.3	8.3	1.5	8.9	5.4	3.4	0.7
Tertiary Sector	71.3	72.0	70.8	73.8	64.5	64.4	73.4
Transportation, communications, etc	7.5	4.3	9.8	4.4	3.7	3.5	12.4
Wholesale trade	7.5	9.7	5.9	9.7	9.8	6.6	5.7
Retail Trade	14.2	20.4	9.9	21.9	14.3	6.4	11.3
Finance	6.2	5.2	6.9	5.6	3.9	3.9	8.2
Services	35.8	32.4	38.2	32.3	32.9	44.1	35.8
Total (2)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(1) : The above data is based on the jobs declared by businesses in 1985 but according to their size in 1984; the resulting difference was deemed insignificant.

(2) : Excludes public service jobs.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.22
Number of Employees by Size of Business
Breakdown in Percentage
According to Sector of Activity
Quebec
1985 (1)

	TOTAL	SMB	LARGE	Size of Business Based on Employment			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
Primary Sector	100.0	47.5	52.5	42.6	4.9	10.1	42.4
Agriculture, forestry and fisheries	100.0	92.3	7.7	84.0	8.3	4.5	3.2
Mines	100.0	17.3	82.7	16.7	2.6	13.9	68.8
Secondary Sector	100.0	39.6	60.4	29.6	10.0	21.9	38.5
Manufacturing industries	100.0	32.1	67.9	22.1	10.0	23.5	44.4
Construction	100.0	79.3	20.7	69.4	9.9	13.4	7.3
Tertiary Sector	100.0	41.5	58.5	34.4	7.1	15.4	43.0
Transportation, communications, etc.	100.0	23.3	76.7	19.4	3.9	7.9	68.8
Wholesale trade	100.0	53.3	46.7	43.1	10.2	15.0	31.7
Retail trade	100.0	59.0	41.0	51.1	7.9	7.7	33.3
Finance	100.0	34.6	65.4	29.7	4.9	10.6	54.8
Services	100.0	37.2	62.8	30.0	7.2	21.0	41.8
Total (2)	100.0	41.4	58.6	33.6	7.8	17.0	41.6

(1) : The above data is based on the jobs declared by businesses in 1985 but according to their size in 1984; the resulting difference was deemed insignificant.

(2) : Excludes public service jobs.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.23
Number of Employees by Size of Business
Breakdown According to Phases in the Life Cycle of Businesses
Quebec
1978 to 1985

	TOTAL	SMB	LARGE	Size of Business Based on Employment			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very large 500 +
1978	2 145 500	778 800	1 366 700	610 100	168 700	392 900	973 800
Variations in numbers resulting from:							
A. New businesses	479 100	387 600	91 500	356 800	30 800	50 700	40 800
B. Business closures	(418 900)	(269 300)	(149 600)	(217 700)	(51 600)	(86 800)	(62 800)
balance (A - B)	60 200	118 300	(58 100)	139 100	(20 800)	(36 100)	(22 000)
C. Businesses with increasing empl. (1)	389 100	210 500	178 600	181 300	29 200	76 700	101 900
D. Businesses with decreasing empl. (1)	(305 800)	(100 500)	(205 300)	(77 400)	(23 100)	(50 500)	(154 800)
balance (C - D)	83 300	110 000	(26 700)	103 900	6 100	26 200	(52 900)
Net variations: in numbers	143 500	228 300	(84 800)	243 000	(14 700)	(9 900)	(74 900)
in percentage	6,7	29,3	(6,2)	39,8	(8,7)	(2,5)	(7,7)
1985 (according to size in 1978)	2 289 000	1 007 100	1 281 900	853 100	154 000	383 000	898 900
1985 (according to size in 1984)	2 289 000	947 100	1 341 900	768 200	178 900	389 300	952 600
Reclassified Manpower (2)	0	(60 000)	60 000	(84 900)	24 900	6 300	53 700

(1) This table pertains to businesses that have been active throughout the period
(2) 1985 employment (according to size in 1984) less 1985 employment (according to size in 1978).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.24
Total Number of Employees
Annual Variations in Number and Percentage
By Size of Business
Quebec
1978 to 1985

	TOTAL		SMB	LARGE	Size of Business Based on Employment			
			(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
					Total Employment			
1978	2,145,500		778,800	1,366,700	610,100	168,700	392,900	973,800
1979	2,203,500		805,000	1,398,500	636,100	168,900	402,600	995,900
1980	2,264,500		819,500	1,445,000	648,700	170,800	398,000	1,047,000
1981	2,275,300		830,700	1,444,600	660,300	170,400	399,100	1,045,500
1982	2,125,100		786,600	1,338,500	631,500	155,100	369,500	969,000
1983	2,049,400		806,700	1,242,700	652,400	154,300	352,700	890,000
1984	2,212,000		878,200	1,333,800	705,200	173,000	381,700	952,100
1985 (1)	2,289,000		947,100	1,341,900	768,200	178,900	389,300	952,600
		%			Variations in Number			
1978-1979	58,300	2.7	48,800	9,500	47,100	1,700	6,000	3,500
1979-1980	60,800	2.8	25,800	35,000	28,400	-2,600	3,000	32,000
1980-1981	11,000	0.5	23,000	-12,000	26,600	-3,600	2,400	-14,400
1981-1982	-150,400	-6.6	-46,300	-104,100	-30,800	-15,500	-32,200	-71,900
1982-1983	-75,500	-3.6	25,800	-101,300	31,700	-5,900	-26,100	-75,200
1983-1984	162,300	7.9	101,900	60,400	89,400	12,500	23,000	37,400
1984-1985	77,400	3.5	69,300	8,100	63,300	6,000	7,600	500
					Variations in Percentage			
1978-1979	100.0		83.7	16.3	80.8	2.9	10.3	6.0
1979-1980	100.0		42.4	57.6	46.7	-4.3	4.9	52.6
1980-1981	100.0		209.1	-109.1	241.8	-32.7	21.8	-130.9
1981-1982	100.0		30.8	69.2	20.5	10.3	21.4	47.8
1982-1983	100.0		-34.2	134.2	-42.0	7.8	34.6	99.6
1983-1984	100.0		62.8	37.2	55.1	7.7	14.2	23.0
1984-1985	100.0		89.5	10.5	81.7	7.8	9.8	0.6

(1) : The numbers of jobs indicated are those reported in 1985 by businesses classified according to their size in 1984.
Note: The sum of the annual variation and the basic figure does not match the figure for the subsequent year, except in the total, due to the annual reclassification of the establishments according to size.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.25
Total Number of Employees
Annual Variations in Number and Percentage
By Sector of Activity
According to Size of Business
Quebec
1984 to 1985

Sector of Activity	Total	SMB (- 100)	Large (100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
			Variations in Number				
Primary Sector	-400	1,800	-2,000	2,000	-200	-1,400	-800
Secondary Sector	13,000	19,500	-6,500	17,800	1,700	-100	-6,400
Manufacturing	5,900	11,400	-5,500	10,200	1,200	-800	-4,700
Construction	7,100	8,100	-1,000	7,600	500	700	-1,700
Tertiary Sector	60,000	43,300	16,700	39,000	4,300	9,000	7,700
Transport and communications	300	2,100	-1,800	2,600	-500	-200	-1,600
Wholesale trade	3,600	2,700	900	2,600	100	-200	1,100
Retail trade	14,900	9,900	5,000	9,200	700	1,200	3,800
Finance	5,900	3,100	2,800	2,700	400	400	2,400
Services	35,300	25,500	9,800	21,900	3,600	7,800	2,000
Total (1)	77,400	69,300	8,100	63,300	6,000	7,600	500
			Variations in Percentage				
Primary Sector	-1.0	10.9	-10.7	13.8	-10.0	-26.4	-4.7
Secondary Sector	2.2	8.7	-1.7	10.8	2.8	-0.1	-2.6
Manufacturing	1.2	7.4	-1.5	9.8	2.4	-0.7	-2.0
Construction	7.8	11.7	-4.7	12.6	5.4	5.6	-19.3
Tertiary Sector	3.8	6.9	1.8	7.5	3.8	3.6	1.1
Transport and communications	0.2	5.6	-1.4	8.5	-7.8	-2.2	-1.3
Wholesale trade	2.2	3.0	1.1	3.7	0.6	-0.8	2.1
Retail trade	4.8	6.3	3.9	5.9	2.8	5.0	3.6
Finance	4.3	6.8	3.0	6.9	6.2	2.0	3.2
Services	4.5	9.2	1.9	9.8	6.5	4.8	0.6
Total (1)	3.5	7.9	0.6	9.0	3.5	2.0	0.1

(1) : The total includes unclassified jobs.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.26
Number of Employees by Sector of Activity
According to Size of Business
Canada
1985 (1)

	TOTAL	SMB	LARGE	Size of Business Based on Employment			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
Primary Sector	269,500	127,600	141,900	112,600	15,000	40,200	101,700
Agriculture, forestry and fisheries	95,400	87,900	7,500	83,000	4,900	6,500	1,000
Mines	174,100	39,700	134,400	29,600	10,100	33,700	100,700
Secondary Sector	2,338,100	860,900	1,477,200	653,600	207,300	494,300	982,900
Manufacturing industries	1,892,200	526,300	1,365,900	363,600	162,700	422,000	943,900
Construction	445,900	334,600	111,300	290,000	44,600	72,300	39,000
Tertiary Sector	6,730,100	2,726,900	4,003,200	2,259,800	467,100	975,900	3,027,300
Transportation, communications, etc.	703,700	163,000	540,700	130,300	32,700	83,400	457,300
Wholesale trade	835,600	354,200	481,400	286,900	67,300	127,200	354,200
Retail trade	1,354,000	710,600	643,400	616,900	93,700	123,600	519,800
Finance	634,200	197,500	436,700	165,300	32,200	74,700	362,000
Services	3,202,600	1,301,600	1,901,000	1,060,400	241,200	567,000	1,334,000
Unclassified	37,000	36,500	500	36,000	500	500	0
Total (2)	9,374,700	3,751,900	5,622,800	3,062,000	689,900	1,510,900	4,111,900

(1) : The above data is based on the jobs declared by businesses in 1985 but according to their size in 1984; the resulting difference was deemed insignificant.

(2) : Excludes public services jobs.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.27
Number of Employees by Sector of Activity
Breakdown in Percentage
According to Size of Business
Canada
1985 (1)

	TOTAL	SMB	LARGE	Size of Business Based on Employment			
		(< 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
Primary Sector	2.9	3.4	2.5	3.7	2.2	2.7	2.5
Agriculture, forestry and fisheries	1.0	2.3	0.1	2.7	0.7	0.4	0.1
Mines	1.9	1.1	2.4	1.0	1.5	2.2	2.4
Secondary Sector	24.9	22.9	26.3	21.3	30.0	32.7	23.9
Manufacturing industries	20.2	14.0	24.3	11.9	23.6	27.9	23.0
Construction	4.8	8.9	2.0	9.5	6.5	4.8	0.9
Tertiary Sector	71.8	72.7	71.2	73.8	67.7	64.6	73.6
Transportation, communications, etc.	7.5	4.3	9.6	4.3	4.7	5.5	11.1
Wholesale trade	8.9	9.4	8.6	9.4	9.8	8.4	8.6
Retrail trade	14.4	18.9	11.4	20.1	13.6	8.2	12.6
Finance	6.8	5.3	7.8	5.4	4.7	4.9	8.8
Services	34.2	34.7	33.8	34.6	35.0	37.5	32.4
Total (2)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(1) : The above data is based on the jobs declared by businesses in 1985 but according to their size in 1984; the resulting difference was deemed insignificant.

(2) : Excludes public service jobs.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.28
Number of Employees by Size of Business
Breakdown in Percentage
According to Sector of Activity
Canada
1985 (1)

	TOTAL	SMB	LARGE	Size of Business Based on Employment			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very Large 500 +
Primary Sector	100.0	47.4	52.6	41.8	5.6	14.9	37.7
Agriculture, forestry and fisheries	100.0	92.2	7.8	87.1	5.1	6.8	1.0
Mines	100.0	22.8	77.2	17.0	5.8	19.4	57.8
Secondary Sector	100.0	36.9	63.1	28.0	8.9	21.1	42.0
Manufacturing industries	100.0	27.8	72.2	19.2	8.6	22.3	49.9
Construction	100.0	75.0	25.0	65.0	10.0	16.3	8.7
Tertiary Sector	100.0	40.5	59.5	33.6	6.9	14.5	45.0
Transportation, communications, etc.	100.0	23.1	76.9	18.5	4.6	11.9	65.0
Wholesale trade	100.0	42.4	57.6	34.3	8.1	15.2	42.4
Retail trade	100.0	52.5	47.5	45.6	6.9	9.1	38.4
Finance	100.0	32.2	68.8	26.1	5.1	11.8	57.0
Services	100.0	40.6	59.4	33.1	7.5	17.7	41.7
Total (2)	100.0	40.0	60.0	32.6	7.4	16.1	43.9

(1) : The above data is based on the jobs declared by businesses in 1985 but according to their size in 1984; the resulting difference was deemed insignificant.
(2) : Excludes public service jobs.

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.29
Number of Employees by Size of Business
Breakdown According to Phases in the Life Cycle of Businesses
Canada
1978 to 1985

	TOTAL	SMB	LARGE	Size of Business Based on Employment			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very large 500 +
1978	8 185 600	3 018 500	5 167 100	2 411 800	606 700	1 389 700	3 777 400
Variations in numbers resulting from:							
A. New businesses	1 813 800	1 498 500	315 300	1 376 700	121 800	171 800	143 500
B. Business closures	(1 376 900)	(962 100)	(414 800)	(806 700)	(155 400)	(258 400)	(156 400)
balance (A - B)	436 900	536 400	(99 500)	570 000	(33 600)	(86 600)	(12 900)
C. Businesses with increasing empl. (1)	1 812 300	944 900	867 400	795 800	149 100	316 400	551 000
D. Businesses with decreasing empl. (1)	(1 060 000)	(425 600)	(634 400)	(340 500)	(85 100)	(177 600)	(456 800)
balance (C - D)	752 200	519 300	233 000	455 300	64 000	138 800	94 200
Net variations: in numbers	1 189 100	1 055 700	133 400	1 025 300	30 400	52 200	81 300
in percentage	14,5	35,0	2,6	42,5	5,0	3,8	2,2
1985 (according to size in 1978)	9 374 700	4 074 200	5 300 500	3 437 100	637 100	1 441 900	3 858 700
1985 (according to size in 1984)	9 374 700	3 751 900	5 622 800	3 062 000	689 900	1 510 900	4 111 900
Reclassified Manpower (2)	0	(322 300)	322 300	(375 100)	52 800	69 000	253 200

(1) This table pertains to businesses that have been active throughout the period.

(2) 1985 employment (according to size in 1984) less 1985 employment (according to size in 1978).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.30
Manufacturing SMB
Changes in Certain Variables
Quebec
1982 to 1984

Variables	1982	1983	1984	1983/1982	1984/1983
	NUMBER			Variations in %	
Number of Establishments					
SMB	9,430	9,438	9,712	0.1	2.9
Total	10,309	10,331	10,649	0.2	3.1
Proportion of SMB in %	91.5	91.4	91.2		
Number of Production Employees					
SMB	153,145	153,714	163,392	0.4	6.3
Total	341,570	340,724	355,020	-0.2	4.2
Proportion of SMB in %	44.8	45.1	46.0		
	(000 $)				
Production Wages					
SMB	2,277,132	2,353,658	2,636,409	3.4	12.0
Total	6,347,527	6,721,160	7,364,107	5.9	9.6
Proportion of SMB in %	35.9	35.0	35.8		
Value of Manufacturing Shipments					
SMB	13,871,546	14,636,061	16,051,760	5.5	9.7
Total	49,097,262	52,100,839	56,998,633	6.1	9.4
Proportion of SMB in %	28.3	28.1	28.2		
Manufacturing Added Value					
SMB	5,793,018	6,228,490	6,780,703	7.5	8.9
Total	18,927,988	20,789,853	23,671,797	9.8	13.9
Proportion of SMB in %	30.6	30.0	28.6		

Source:
Bureau de la statistique du Québec, Statistiques des PME manufacturières du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.31
Manufacturing SMB
Breakdown of Principal Variables
By Sector of Activity
Quebec
1985 (1)

	Production Employees		Production Wages		Value of Manufacturing Shipments		Manufacturing Added Value	
	Number	%	000 $	%	000 $	%	000 $	%
Food	12,058	7.3	211,172	7.6	3,027,215	17.9	631,222	8.7
Beverages	1,287	0.8	27,128	1.0	237,938	1.4	118,193	1.6
Tobacco	52	0.0	964	0.0	8,493	0.1	4,194	0.1
Rubber products	x	x	x	x	x	x	x	x
Plastic products	4,564	2.8	77,480	2.8	523,632	3.1	205,628	2.8
Leather and related products	4,777	2.9	65,491	2.4	275,564	1.6	142,960	2.0
Primary textiles	2,673	1.6	41,887	1.5	370,599	2.2	134,325	1.9
Textile products	5,952	3.6	86,583	3.1	479,659	2.8	208,569	2.9
Garment	41,709	25.4	562,264	20.2	2,402,013	14.2	1,136,875	15.7
Wood	15,219	9.3	262,702	9.4	1,438,253	8.5	608,432	8.4
Furniture and furnishing	9,948	6.0	170,967	6.1	774,211	4.6	411,781	5.7
Paper and related products	3,882	2.4	80,870	2.9	546,229	3.2	227,757	3.1
Printing, publishing and related industries	11,315	6.9	232,105	8.3	1,148,484	6.8	669,332	9.2
Primary metal	2,163	1.3	45,645	1.6	244,522	1.4	115,011	1.6
Metal products	15,394	9.4	300,202	10.8	1,496,039	8.8	809,870	11.2
Machinery (except electrical)	6,069	3.7	130,023	4.7	679,701	4.0	351,038	4.8
Transportation equipment	3,717	2.3	71,809	2.6	358,537	2.1	176,789	2.4
Electrical and electronic products	5,532	3.4	93,962	3.4	660,663	3.9	276,730	3.8
Non-metallic mineral products	x	x	x	x	x	x	x	x
Refined petroleum and coal products	146	0.1	3,044	0.1	64,283	0.4	17,876	0.2
Chemical industry	3,914	2.4	74,870	2.7	869,782	5.1	346,932	4.8
Other manufacturing industries	x	x	x	x	x	x	x	x
Total all industries	164,480	100.0	2,785,194	100.0	16,915,629	100.0	7,255,456	100.0

x : Confidential data
(1) : For each group of industries in the manufacturing sector, these are preliminary estimates based on the 1984 structure.

Source:
Bureau de la statistique du Québec, Statistiques des PME manufacturières au Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.32
Manufacturing SMB
Changes in Employment and Added Value
By Sector of Activity
Quebec
1982 to 1985

	Production Employees			Manufacturing Added Value		
	1982	1985 (1)	Ann. Var.	1982	1985 (1)	Ann. Var.
	Number		%	Thousands of Dollars		%
Food	12,086	12,058	(0.1)	571,145	631,222	3.4
Beverages	1,266	1,287	0.5	115,042	118,193	0.9
Tobacco	58	52	(3.6)	2,724	4,194	15.3
Rubber products	x	x	x	x	x	x
Plastic products	4,707	4,564	(1.0)	177,551	205,628	5.0
Leather and related products	5,810	4,777	(6.3)	170,634	142,960	5.7
Primary textiles	2,867	2,673	(2.3)	114,677	134,325	5.4
Textile products	5,659	5,952	1.7	174,594	208,569	6.0
Garment	39,410	41,709	1.9	1,008,126	1,136,875	4.0
Wood	11,650	15,219	9.3	378,461	608,432	17.0
Furniture and furnishings	9,710	9,948	0.8	304,994	411,781	10.4
Paper and related products	3,851	3,882	0.3	174,306	227,757	9.2
Printing, publishing and related industries	9,861	11,315	4.7	503,705	669,332	9.8
Primary metal	2,205	2,163	(0.6)	99,255	115,011	5.0
Metal products	14,754	15,394	1.4	604,399	809,870	10.1
Machinery (except electrical)	4,818	6,069	8.0	248,400	351,038	12.1
Transportation equipment	3,134	3,717	5.9	131,220	176,789	10.3
Electrical and electronic products	4,948	5,532	3.8	217,918	276,730	8.2
Non-metallic mineral products	4,178	x	x	191,327	x	x
Refined petroleum and coal products	132	146	3.4	14,326	17,876	7.6
Chemical industry	3,370	3,914	5.1	269,126	346,932	8.7
Other manufacturing industries	x	x	x	x	x	x
Total all industries	153,145	164,480	2.4	5,793,018	7,255,456	7.7

x : Confidential data.
(1) : For each group of industries in the manufacturing sector,
these are preliminary estimates based on the 1984 structure.

Source:
Bureau de la statistique du Québec, Statistiques des PME manufacturières au Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.33
Manufacturing SMB
Changes in Principal Variables by Administrative Region
Quebec
1982 to 1984

ADMINISTRATIVE REGION	Units	1982	1983	1984	Proportion of SMB in the Manufacturing Sector of the Region (%) 1982	1983	1984
LOWER SAINT LAWRENCE/GASPE/MAGDALEN ISLANDS							
Number of establishments	N	187	181	189	91.2	91.4	90.9
Number of production employees	N	2 266	2 403	2 420	51.3	56.1	46.5
Production wages	$000	33 081	35 511	38 418	40.7	42.8	37.1
Value of manufacturing shipments	$000	177 721	194 901	212 522	37.6	42.5	35.5
Manufacturing added value	$000	73 556	83 357	86 435	35.7	41.9	33.2
SAGUENAY/LAC-SAINT-JEAN							
Number of establishments	N	196	201	215	85.6	86.6	88.1
Number of production employees	N	1 761	1 934	2 518	13.5	14.7	19.0
Production wages	$000	30 309	33 082	45 480	8.7	8.6	11.4
Value of manufacturing shipments	$000	186 755	244 719	326 799	7.8	9.7	12.0
Manufacturing added value	$000	75 590	81 882	106 896	8.2	7.5	8.9
QUEBEC							
Number of establishments	N	1 262	1 257	1 307	93.1	92.8	92.5
Number of production employees	N	18 748	18 970	20 821	52.1	53.0	53.0
Production wages	$000	280 197	289 292	338 620	44.0	44.0	44.2
Value of manufacturing shipments	$000	1 685 356	1 774 704	2 040 868	33.0	33.0	31.8
Manufacturing added value	$000	674 624	736 874	829 533	35.7	36.3	32.3

continued...

Table 8.33 (continued)
Manufacturing SMB
Changes in Principal Variables by Administrative Region
Quebec
1982 to 1984

ADMINISTRATIVE REGION	Units	1982	1983	1984	Proportion of SMB in the Manufacturing Sector of the Region (%)		
					1982	1983	1984
ST.MAURICE/BOIS-FRANCS							
Number of establishments	N	773	752	784	92.6	91.5	91.2
Number of production employees	N	12 927	12 524	13 057	44.8	42.6	43.7
Production wages	$000	190 468	190 264	207 164	36.4	33.3	33.2
Value of manufacturing shipments	$000	1 227 191	1 241 308	1 322 357	34.6	32.0	30.2
Manufacturing added value	$000	444 506	480 127	523 686	33.4	32.6	29.6
EASTERN TOWNSHIPS							
Number of establishments	N	344	352	367	90.8	90.0	90.4
Number of production employees	N	5 616	5 992	6 454	37.9	39.5	42.1
Production wages	$000	78 877	84 730	98 229	30.7	31.3	33.8
Value of manufacturing shipments	$000	455 109	455 140	510 539	29.4	28.2	29.8
Manufacturing added value	$000	188 199	213 633	240 014	26.9	28.2	29.9
MONTREAL							
Number of establishments	N	6 375	6 404	6 552	91.7	91.7	91.5
Number of production employees	N	108 564	108 315	114 564	47.3	47.7	48.6
Production wages	$000	1 612 963	1 662 831	1 849 575	38.8	38.1	38.8
Value of manufacturing shipments	$000	9 809 340	10 360 252	11 283 205	29.5	29.3	29.7
Manufacturing added value	$000	4 211 131	4 485 280	4 847 689	32.4	31.6	30.5

continued...

Table 8.33 (continued)
Manufacturing SMB
Changes in Principal Variables by Administrative Region
Quebec
1982 to 1984

ADMINISTRATIVE REGION	Units	1982	1983	1984	Proportion of SMB in the Manufacturing Sector of the Region (%)		
					1982	1983	1984
OUTAOUAIS							
Number of establishments	N	144	143	146	88.3	89.4	87.4
Number of production employees	N	1 759	1 980	2 022	26.2	29.1	28.5
Production wages	$000	25 347	29 802	32 288	17.5	18.8	18.0
Value of manufacturing shipments	$000	154 050	180 985	178 129	9.5	12.5	10.0
Manufacturing added value	$000	61 300	76 644	79 576	12.4	16.6	13.6
ABITIBI/TEMISCAMINGUE							
Number of establishments	N	108	105	108	78.8	77.7	77.1
Number of production employees	N	1 075	1 184	1 192	21.0	21.2	20.3
Production wages	$000	18 834	21 298	20 839	16.0	16.0	14.9
Value of manufacturing shipments	$000	132 787	148 019	143 578	19.7	18.0	16.8
Manufacturing added value	$000	47 601	54 768	53 406	18.4	17.1	15.6
NORTH SHORE AND NEW QUEBEC							
Number of establishments	N	41	43	44	78.8	78.2	84.6
Number of production employees	N	429	410	344	13.8	11.1	11.0
Production wages	$000	7 122	6 814	5 914	8.9	6.9	6.3
Value of manufacturing shipments	$000	43 202	36 001	33 730	9.0	5.9	5.7
Manufacturing added value	$000	16 469	15 886	13 428	11.7	6.5	5.7

SOURCE: Bureau de la statistique du Québec, Statistique des PME manufacturières du Québec, 1987.

Table 8.34
Total Employment
Breakdown by Age Group
According to Size of Business
Quebec
1984

		Size of Business Based on Employment				
Age	Total	0-4	5-19	20-49	50-99	100 +
			Number of Jobs			
15-24	285,006	41,651	53,038	38,597	25,791	125,929
25-34	657,355	56,006	88,226	68,746	50,748	393,629
35-44	612,716	45,770	71,413	57,012	45,924	392,597
45-54	393,391	30,529	46,662	38,795	30,449	246,956
55 +	242,655	19,759	27,766	23,805	18,732	152,593
Total	2,191,123	193,715	287,105	226,955	171,644	1,311,704
		Breakdown by Age Group, in Percentage				
15-24	13.0	21.5	18.5	17.0	15.0	9.6
25-34	30.0	28.9	30.7	30.3	29.6	30.0
35-44	28.0	23.6	24.9	25.1	26.8	29.9
45-54	18.0	15.8	16.3	17.1	17.7	18.8
55 +	11.1	10.2	9.7	10.5	10.9	11.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
		Breakdown by Size, in Percentage				
15-24	100.0	14.6	18.6	13.5	9.0	44.2
25-34	100.0	8.5	13.4	10.5	7.7	59.9
35-44	100.0	7.5	11.7	9.3	7.5	64.1
45-54	100.0	7.8	11.9	9.9	7.7	62.8
55 +	100.0	8.1	11.4	9.8	7.7	62.9
Total	100.0	8.8	13.1	10.4	7.8	59.9

Source:
Statistics Canada, Small Business Statistics
Demographic and Earnings Profile of Business Employment, 1984.
Compiled by the Direction des etudes sectorielles, DGRP, MIC.

Table 8.35
Employment of Young People (15 - 24) in Small and Medium-Sized Businesses (SMB)
Breakdown by Sector of Activity
Quebec
1984

Sector	Number of Young People in SMB	Breakdown by Sector	Proportion of Jobs Held by Young People in the Sector	
			SMB	Large
		(%)	(%)	(%)
Primary Sector	3 989	2,5	24,6	5,6
Agriculture, forestry and fisheries	3 602	2,3	26,8	14,0
Mines	387	0,2	14,0	5,0
Secondary Sector	32 306	20,3	14,4	8,8
Manufacturing industries	25 493	16,0	16,5	9,1
Construction	6 813	4,3	9,8	4,2
Tertiary Sector	120 805	75,9	19,0	10,0
Transportation and communications	4 789	3,0	12,5	5,2
Wholesale trade	11 018	6,9	12,5	10,4
Retail trade	41 827	26,3	22,7	18,2
Finance	5 353	3,4	11,6	9,8
Services	57 818	36,3	20,7	9,2
Total (1)	159 077	100,0	18,0	9,6

(1) : The total includes unclassified jobs.

Source:
Statistics Canada, Small Business Statistics,
Demographic and Earnings Profile of Business Employment, 1984.
Compiled by the Direction des études sectorielles.

Table 8.36
Total Employment
Breakdown by Size of Business
According to Sex
Quebec
1984

Size	Number of Jobs	Men (%)	Women (%)
Small Businesses (0 - 49)	707,775	64,8	35,2
0- 4	193 715	57,3	42,7
5- 19	287 105	66,6	33,4
20- 49	226 955	69,0	31,0
Medium-Sized Businesses (50-99)	171 644	67,3	32,7
Total SMB	879 419	65,3	34,7
Large Businesses (100 +)	1,311,704	65,1	34,9
Total	2,191,123	65,2	34,8

Source:
Statistics Canada, Small Business Statistics,
Demographic and Earnings Profile of Business Employment, 1984.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.37
Employment of Women in SMB
Breakdown by Sector of Activity
Quebec
1984

Sector	Number of Women in SMB	Breakdown by Sector	Proportion of Jobs Held by Women in the Sector	
			SMB	Large
		(%)	(%)	(%)
Primary Sector	2,742	0.9	16.9	5.3
Agriculture, forestry, fisheries	2,567	0.8	19.1	6.8
Mines	175	0.1	6.3	5.2
Secondary Sector	49,881	16.4	22.3	18.6
Manufacturing industries	44,160	14.5	28.7	19.4
Construction	5,721	1.9	8.2	2.6
Tertiary Sector	249,765	81.8	39.3	42.4
Transportation and communication	7,044	2.3	18.3	18.4
Wholesale trade	18,956	6.2	21.6	17.2
Retail trade	61,882	20.3	33.6	42.7
Finance	21,852	7.2	47.3	45.0
Services	140,031	45.9	50.2	51.0
Total (1)	305,289	100.0	34.7	34.9

(1) : The total includes unclassified jobs.

Source:
Statistics Canada, Small Business Statistics,
Demographic and Earnings Profile of Business Employment, 1984.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.38
Total Income of Self-Employed Workers
Breakdown According to Profession
Québec
1982 to 1985

	1982				1983				1984				1985			
Profession	Number	%	Income $ 000	%	Number	%	Income $ 000	%	Number	%	Income $ 000	%	Number	%	Income $ 000	%
Farmer	31,579	16.4	385,992	10.9	31,133	16.3	371,771	10.2	31,665	16.3	418,195	10.3	31,292	15.8	450,903	10.3
Fisherman	2,498	1.3	34,608	1.0	2,290	1.2	33,022	0.9	2,090	1.1	30,130	0.7	2,042	1.0	33,072	0.8
Liberal Profession	31,177	16.2	1,398,119	39.5	29,540	15.5	1,396,686	38.1	33,190	17.1	1,626,065	39.9	37,232	18.8	1,864,549	42.1
Commission Salesman	10,189	5.3	193,125	5.5	9,132	4.8	177,640	4.9	9,251	4.8	193,870	4.8	10,654	5.4	230,341	5.3
Business Owner	116,640	60.7	1,525,911	43.1	118,804	62.2	1,682,019	45.9	118,297	60.7	1,801,426	44.3	116,666	59.0	1,817,637	41.5
Total	192,083	100.0	3,537,755	100.0	190,899	100.0	3,661,138	100.0	194,493	100.0	4,067,686	100.0	197,886	100.0	4,376,502	100.0

Source:
Ministère du Revenu du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.39
Self-Employed Workers
Breakdown According to Profession
By Administratice Region
Quebec
1985

Profession	Lower St.Lawrence Gaspé/ Magdalen Islands	Saguenay/ Lac-St-Jean	Quebec	St.Maurice/ Bois-Francs	Eastern Townships	Montreal	Outaouais	Abitibi-Témiscamingue	North Shore/ New - Quebec	Non Residents	Total (1)
Farmer	1 152	1 318	7 844	4 942	1 984	11 098	1 237	811	82	9	30 477
Fisherman	1 132	20	66	58	...	126	20	40	474	..	1 936
Liberal Profession	888	1 067	5 554	1 775	1 331	22 695	1 166	594	270	70	35 410
Commission Salesman	161	384	1 625	649	379	6 207	373	122	92	..	9 992
Business Owner	4 538	4 377	18 262	8 889	4 670	61 286	5 559	2 680	1 383	102	111 746
Total	7 871	7 166	33 351	16 313	8 364	101 412	8 355	4 247	2 301	181	189 561
Total Number of Taxpayers	125 962	160 750	585 540	242 934	133 075	2 208 394	152 568	83 042	64 077	4 789	3 781 131
Entrepreneurial Ratio (%) (number of entrepreneurs/ number of taxpayers)	6,2	4,5	5,7	6,7	6,3	4,6	5,5	5,1	3,6	3,8	5,0

(1) : The difference between 189,561 and the total 197,886 (see Table 8.38) is due to the exclusion of workers whose place of residence is undetermined.

Source:
Ministère du Revenu du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.40
Self-Employed Workers
Breakdown by Income Bracket
According to Profession
Quebec
1983 to 1985

Profession	1983						1984						1985					
	Under $10 000	10 000 to $25 000	25 000 to $50 000	50 000 to $100 000	$100 000 and Over	Total	Under $10 000	10 000 to $25 000	25 000 to $50 000	50 000 to $100 000	$100 000 and Over	Total	Under $10 000	10 000 to $25 000	25 000 to $50 000	50 000 to $100 000	$100 000 and Over	Total
	Number						Number						Number					
Farmer	16 182	12 148	2 476	287	40	31 133	14 397	13 709	3 151	369	39	31 665	13 207	13 682	3 950	404	49	31 292
Fisherman	1 023	986	201	...	...	2 290	906	926	204	...	...	2 090	781	929	268	...	...	2 042
Liberal Profession	4 842	6 033	7 226	8 524	2 915	29 540	5 835	6 885	7 289	9 142	4 039	33 190	7 113	7 472	7 693	9 866	5 088	37 232
Commission Salesman	3 161	3 577	1 866	481	48	9 132	2 743	3 865	2 024	552	67	9 251	3 352	4 133	2 335	722	112	10 654
Business Owner	55 239	47 296	13 717	2 175	377	118 804	50 174	49 670	15 387	2 566	500	118 297	48 344	49 420	15 468	2 962	472	116 666
Total	80 447	70 040	25 485	11 467	3 380	190 899	74 055	75 055	28 055	12 629	4 645	194 493	72 797	75 636	29 714	13 954	5 721	197 886

Source:
Ministère du Revenu du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.41
Income of Self-Employed Workers
Breakdown by Income Bracket
According to Profession
Quebec
1983 to 1985

Profession	1983						1984						1985					
	Under $10 000	10 000 to $25 000	25 000 to $50 000	50 000 to $100 000	$100 000 and Over	Total	Under $10 000	10 000 to $25 000	25 000 to $50 000	50 000 to $100 000	$100 000 and Over	Total	Under $10 000	10 000 to $25 000	25 000 to $50 000	50 000 to $100 000	$100 000 and Over	Total
	$ 000						$ 000						$ 000					
Farmer	85 669	182 107	81 000	18 269	3 719	371 771	78 294	208 055	102 764	23 046	3 248	418 195	71 014	210 948	133 492	28 160	4 225	450 903
Fishermen	6 383	14 513	6 892	.....	.....	33 022	5 326	13 569	7 037	.....	.....	30 130	5 304	14 171	8 884	.....	.....	33 072
Liberal Profession	25 156	103 143	266 284	610 952	391 151	1 396 686	30 420	118 060	266 217	662 184	547 183	1 626 065	18 941	126 744	282 072	714 701	704 093	1 844 549
Commission Salesmen	16 642	59 618	63 998	31 537	4 738	177 640	15 610	63 011	70 105	36 167	8 550	193 870	17 990	67 774	81 301	47 364	15 913	230 341
Business Owner	286 775	745 004	449 238	141 620	59 382	1 682 019	256 590	787 411	510 635	168 766	78 025	1 801 426	254 105	783 812	516 499	192 655	70 566	1 817 637
Total	420 625	1 104 385	867 412	802 378	458 990	3 661 138	386 240	1 190 106	956 758	890 163	637 006	4 067 686	367 354	1 201 449	1 022 248	982 880	794 797	4 376 502

Source:
Ministère du Revenu du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.42
Self-Employed Workers
Breakdown by Profession
According to Age and Sex
Quebec
1985

Profession		Age										Total	
		Men					Women						
		29 and under	30-39	40-59	60 +	Total	29 and under	30-39	40-59	60 +	Total	Men	Women
Farmer	Number	3 710	6 739	13 668	3 944	28 061	454	1 138	1 300	336	3 228	28 061	3 228
	%	13,2	24,0	48,7	14,1	100,0	14,1	35,3	40,3	10,4	100,0	89,7	10,3
Fisherman	Number	610	477	656	108	1 851	15	90	71	11	187	1 851	187
	%	33,0	25,8	35,4	5,8	100,0	8,0	48,1	38,0	5,9	100,0	90,8	9,2
Liberal Profession	Number	3 137	10 490	12 385	3 141	29 153	2 005	3 456	2 304	312	8 077	29 153	8 077
	%	10,8	36,0	42,5	10,8	100,0	24,8	42,8	28,5	3,9	100,0	78,3	21,7
Commission Salesman	Number	1 480	1 989	3 356	1 210	8 035	534	801	1 101	185	2 621	8 035	2 621
	%	18,4	24,8	41,8	15,1	100,0	20,4	30,6	42,0	7,1	100,0	75,4	24,6
Business Owner	Number	10 803	23 467	42 907	10 075	87 252	5 405	9 336	12 259	2 414	29 414	87 252	29 414
	%	12,4	26,9	49,2	11,5	100,0	18,4	31,7	41,7	8,2	100,0	74,8	25,2
Total	Number	19 740	43 162	72 972	18 478	154 352	8 413	14 821	17 035	3 258	43 527	154 352	43 527
	%	12,8	28,0	47,3	12,0	100,0	19,3	34,1	39,1	7,5	100,0	78,0	22,0

Source:
Ministère du Revenu du Québec, 1987.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Table 8.43
Cooperative Businesses According to Certain Variables
Quebec

	Financial Cooperatives 1986(1)	Non-Financial Cooperatives (2)	Total
Number of Cooperatives	1 373	1 937(3)	3 310
Number of Owner/ Members	4 249 239	480 844	4 730 083
Total Assets ($000, 000)	25 963	1 237	27 200
Sales or Income ($000, 000)	2 677	3 283	5 960

(1) Excluding the insurance sector, the statistical data on financial cooperatives include the Caisses populaires et d'économie Desjardins (as at December 31, 1986) and the caisses d'établissement.

(2) These statistics cover cooperatives which had submitted their annual report as at December 31, 1985, namely 982 cooperatives. Newly formed cooperatives and cooperatives that are inactive or in the process of being dissolved, among others, have been excluded.

(3) The number of cooperatives reflects the situation in July 1987.

Sources: Direction des coopératives, MIC
Inspecteur général des institutions financières
La Confédération des caisses populaires et d'économie Desjardins
Fédération des caisses d'établissement.

Table 8.44
Non-Financial Cooperatives According to Certain Variables
By Type of Cooperative
Quebec
1985(1)

	Number of Cooperatives	Number of Members	Total Assets (2) $000	Sales $000
Consumers				
Food	113	49 314	49 155	215 549
Housing	490	13 319	299 770	45 228
Student	39	246 376	5 852	27 171
Funeral Services	22	93 721	6 988	3 812
Other	61	26 643	30 697	57 647
Total	**725**	**429 373**	**392 462**	**349 407**
Producers				
Farmers	108	40 221	762 454	2 805 934
Taxis	20	2 229	4 773	5 221
Other	23	2 597	8 763	20 751
Total	**151**	**45 047**	**775 990**	**2 831 906**
Workers				
Forestry	25	2 145	53 863	82 582
Other	59	2 001	14 690	18 901
Total	**84**	**4 146**	**68 553**	**101 483**
Other	**22**	**2 278**	**739**	**1 199**
GRAND TOTAL	**982**	**480 844**	**1 237 744**	**3 283 995**

(1) The statistics provided in this table cover cooperatives which had submitted their annual report as at December 31, 1985. Newly formed cooperatives and cooperatives that are inactive or in the process of being dissolved, among others, have been excluded.

(2) These figures do not take into account assets held individually by members, particularly in the forestry, taxi and agricultural sectors.

Source: Direction des coopératives, MIC.

Table 8.45
Number of Cooperatives
Breakdown by Type of Cooperative
According to Administrative Region
Quebec:
1987(1)

	Consumers	Producers	Workers	Other	Total Non-Financial		Financial (2)		TOTAL	
Region	Number	Number	Number	Number	Number	%	Number	%	Number	%
Lower St. Lawrence/Gaspé Magdalen Islands	81	12	28	7	128	6.6	91	6.6	219	6.6
Saguenay/Lac-Saint-Jean	85	19	38	2	144	7.5	75	5.5	219	6.6
Quebec	325	65	49	8	447	23.1	336	24.5	783	23.7
St. Maurice/Bois-Francs	84	18	12	3	117	6.1	156	11.4	273	8.3
Eastern Townships	66	10	16	5	97	5.0	76	5.5	173	5.2
Montreal	644	41	83	21	789	40.7	499	36.3	1 288	39.0
Outaouais	52	8	16	2	78	4.0	49	3.6	127	3.8
Abitibi/Témiscamingue	32	11	33	2	78	4.0	56	4.1	134	4.0
North Shore and New Quebec	44	4	11	-	59	3.0	35	2.5	94	2.8
TOTAL	1 413	188	286	50	1 937	100.0	1 373	100.0	3 310	100.0

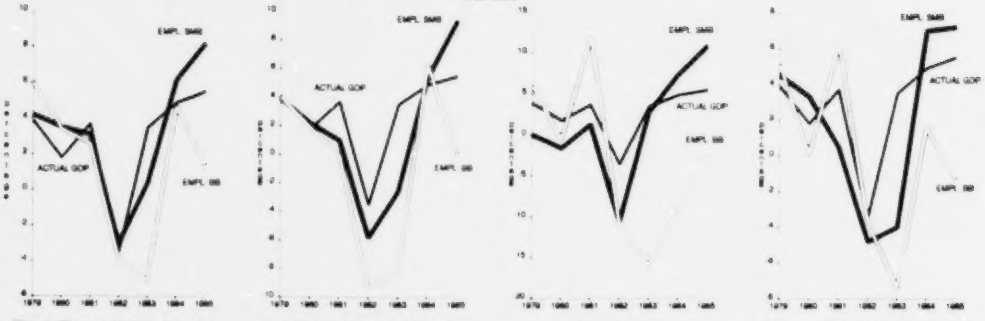
(1) The statistics on non-financial cooperatives reflect their position in July 1987. The information on financial cooperatives refers to the situation as at December 31, 1986.

(2) Excluding the insurance sector.

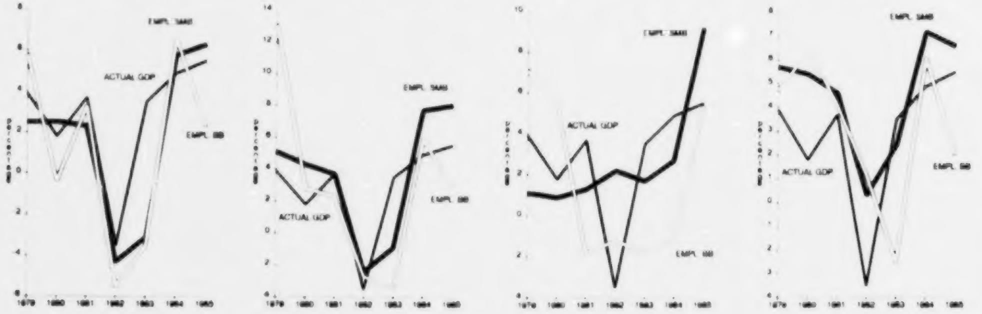
Sources: Direction des coopératives, MIC, 1987
Bureau de la statistique du Québec.

Appendices

Appendix 1
Growth Rate of Actual GDP and Employment
Canada



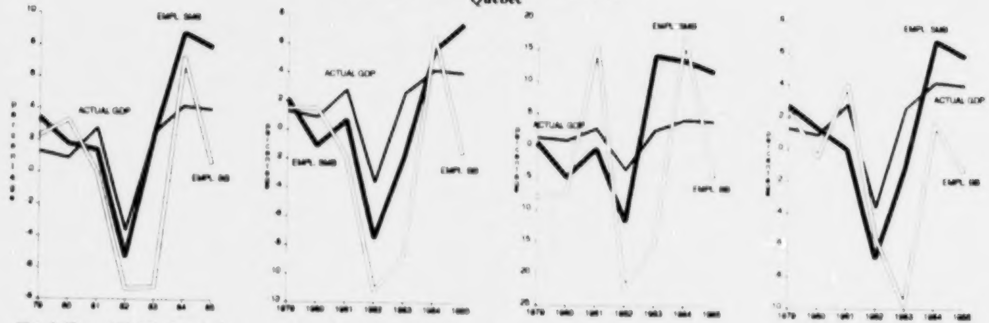
Total (Except Public Service) **Manufacturing Industries** **Construction** **Transportation & Communications**



Wholesale Trade **Retail Trade** **Financial Intermediaries** **Services to Business**

Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987 and CANSIM (D20031).
Compiled by the Direction des études sectorielles, DGRP, MIC, 1987

Appendix 2
Growth Rate of Actual GDP and Employment
Quebec

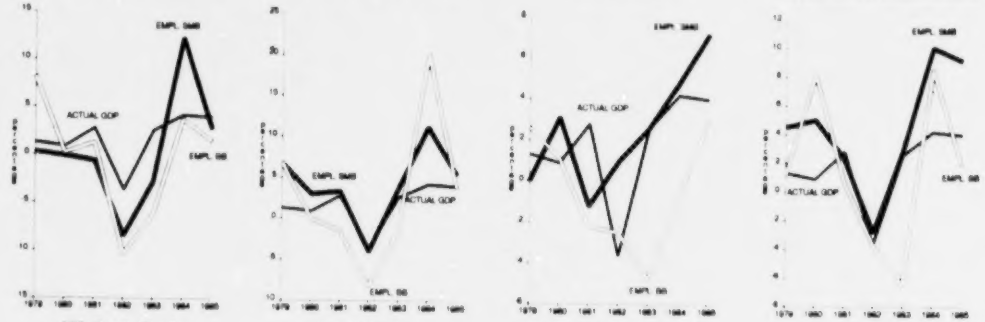


Total (Except Public Service)

Manufacturing Industries

Construction

Transportation & Communications



Wholesale Trade

Retail Trade

Financial Intermediaries

Services to Business

Source: Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status, 1987 and CANSIM (D20031)
Compiled by the Direction des études sectorielles, DGRP, MIC, 1987

Appendix 3
Fluctuations in Total Employment (1) by Size of Business (000)
All Sectors Except Public Service
Canada
1982 and 1983

	TOTAL	SMB	LARGE COMPANIES	COMPANY SIZE BASED ON EMPLOYMENT			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very large 500 +
1982	8,834.7	3,252.3	5,582.4	2,619.8	632.5	1,442.9	4,139.5
Fluctuations (1982-1983)							
A. New Companies	207.8	168.4	39.4	151.9	16.5	22.8	16.6
B. Closures	(210.1)	(147.2)	(62.9)	(128.1)	(19.1)	(36.5)	(26.4)
balance (A - B)	(2.3)	21.2	(23.5)	23.8	(2.6)	(13.7)	(9.8)
C. Growing Companies	623.2	438.9	184.3	387.6	51.3	80.6	103.7
D. Declining Companies	(895.2)	(424.8)	(470.4)	(347.3)	(77.5)	(156.0)	(314.4)
balance (C - D)	(272.0)	14.1	(286.1)	40.3	(26.2)	(75.4)	(210.7)
Net Fluctuations: in number	(274.3)	35.3	(309.6)	64.1	(28.8)	(89.1)	(220.5)
in percentage	(3.1)	1.1	(5.5)	2.4	(4.6)	(6.2)	(5.3)
1983 (according to size in 1982)	8,560.4	3,287.6	5,272.8	2,683.9	603.7	1,353.8	3,919.0
1983 (according to size in 1983)	8,560.4	3,265.2	5,295.2	2,650.0	615.2	1,375.6	3,919.6
Manpower Reclassified (2)	0.0	(22.4)	22.4	(33.9)	11.5	21.8	0.6

(1) Employment is calculated in person/years.

(2) Employment in 1983 (according to size in 1983) less employment in 1983 (according to size in 1982).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Appendix 3 (continued)
Fluctuations in Total Employment (1) by Size of Business (000)
All Sectors Except Public Service
Canada
1983 and 1984

	TOTAL	SMB	LARGE COMPANIES	COMPANY SIZE BASED ON EMPLOYMENT			
		(- 100)	(100 +)	Small 1-49	Medium 50-99	Large 100-499	Very large 500 +
1983	8,560.4	3,265.2	5,295.2	2,650.0	615.2	1,375.6	3,919.6
Fluctuations (1983-1984)							
A. New Companies	240.2	171.1	69.1	153.0	18.1	30.6	38.5
B. Closures	(231.1)	(147.7)	(83.4)	(130.3)	(17.4)	(43.1)	(40.3)
balance (A - B)	9.1	23.4	(14.3)	22.7	0.7	(12.5)	(1.8)
C. Growing Companies	931.6	578.5	353.1	499.0	79.5	146.3	206.8
D. Declining Companies	(488.4)	(286.2)	(202.2)	(245.7)	(40.5)	(77.8)	(124.4)
balance (C - D)	443.2	292.3	150.9	253.3	39.0	68.5	82.4
Net Fluctuations: in number	452.3	315.7	136.6	276.0	39.7	56.0	80.6
in percentage	5.3	9.7	2.6	10.4	6.5	4.1	2.1
1984 (according to size in 1983)	9,012.7	3,580.9	5,431.8	2,926.0	654.9	1,431.6	4,000.2
1984 (according to size in 1984)	9,012.7	3,468.7	5,544.0	2,806.0	662.7	1,469.8	4,074.2
Manpower Reclassified (2)	0.0	(112.2)	112.2	(120.0)	7.8	38.2	74.0

(1) Employment is calculated in person/years.
(2) Employment in 1984 (according to size in 1984) less employment in 1984 (according to size in 1983).

Source:
Statistics Canada, Employment Dynamics by Province, Industry Classification, Firm Size and Life Status.
Compiled by the Direction des études sectorielles, DGRP, MIC.

Appendix 4
Wage Scale According to Size of Company and by Manufacturing Industry
Production Salaries per REmunerated Man-Hour and Over Added Value
For the Manufacturing Industry
Quebec, 1982 et 1984

	Production Salaries/ Remunerated Man-Hour		Annual Growth Rate (1982-1984)		Production Salaries/ Added Value		Annual Growth Rate (1982-1984)	
	SMB	Large Companies	SMB	Large Companies	SMB	Large Companies	SMB	Large Companies
	$	$	%	%	$	$	%	%
Food	8.36	10.55	6.1	5.3	0.34	0.24	1.5	-2.0
Beverages	10.10	13.92	4.4	5.1	0.24	0.22	9.5	4.9
Tobacco	7.93	16.87	7.8	11.8	0.24	0.18	-10.6	-2.7
Rubber Products	x	x	x	x	x	x	x	x
Plastic Products	7.90	9.47	5.5	4.3	0.37	0.28	-2.6	0.0
Leather and Related Products	6.58	7.08	4.2	5.3	0.45	0.50	3.5	-1.9
Primary Textiles	7.47	9.24	5.1	9.1	0.32	0.39	-5.7	-3.6
Textile Products	6.70	7.90	2.6	3.9	0.42	0.34	-1.2	1.5
Garment	6.53	6.92	1.6	5.0	0.49	0.46	1.0	0.0
Wood	7.90	10.24	4.8	10.2	0.43	0.39	-3.3	-8.9
Furniture and Accessories	7.70	8.47	5.8	5.9	0.42	0.34	-3.4	-6.6
Paper and Related Products	9.81	14.46	5.9	8.3	0.37	0.35	-3.8	-6.6
Printing. Publishing and Related Industries	10.42	15.42	6.1	6.2	0.35	0.20	0.0	-6.7
Primary Metals	9.60	16.67	2.9	7.5	0.39	0.30	-1.3	-15.5
Metal Products	9.31	13.09	4.8	7.0	0.42	0.33	0.0	4.9
Machinery (except electrical)	9.75	11.52	1.7	5.3	0.37	0.30	0.0	-1.6
Transportation Equipment	9.24	12.46	2.7	6.2	0.42	0.25	-1.2	-24.6
Electrical and Electronic Products	7.90	12.05	3.7	9.1	0.35	0.31	1.5	7.2
Non-Metallic Meneral Products	x	x	x	x	x	x	x	x
Refined Petroleum and Coal Products	12.28	19.25	16.4	12.1	0.14	0.06	-9.3	-32.1
Chemical Industry	9.00	12.43	5.0	6.5	0.21	0.17	0.0	-2.8
Miscellaneous Manufacturing Industries	x	x	x	x	x	x	x	x
Total All Industries	8.03	11.96	4.2	6.3	0.39	0.28	0.0	-5.0

x: Confidential data.

Sources: Bureau de la statistique du Québec, Statistiques des PME manufacturières au Québec, 1987 Edition (preliminary). Compiled by the Direction des études sectorielles, DGRP, MIC.

Appendix 5

List of Bureaux and Délégations du Québec

Africa

Abidjan

Bureau du Québec
a/s de l'Ambassade du Canada
Av. Nogues
B.P. 4104
Abidjan 01
Côte-d'Ivoire
Tel.: 9-011-225-32-20-09
Telex: 983-23593 (Domcan Abidjan)

North America

Edmonton

Bureau du Québec
Highfield Place Building
10010 - 106th St., 10th Floor
Edmonton, Alberta
T5J 3L8
Tel.: (403) 423-6651
Telex: 0374811 (Govt Que Edm)

Moncton

Bureau du Québec
Place l'Assomption
770 Main Street
P.O. Box 6005
Moncton, New Brunswick
E1C 1E7
Tel.: (506) 382-7851
Telex: 0142168 (Gouv Que Mctn)

Ottawa

Bureau du Québec
112 Kent St., Suite 1201
Place de ville, Tower B
Ottawa, Ontario
K1P 5P2
Tel.: (613) 238-5322
Fax : (613) 563-9137

Toronto

Bureau du Québec
20 West Queen Street
Suite 1004, Box 13
Toronto, Ontario
M5H 3S3
Tel.: (416) 977-6060
Telex: 06-22071 (Govt Que Tor)
Fax: (416) 596-1407

Atlanta

Bureau du Québec
Peachtree Center Tower
230 Peachtree Street N.W.
Suite 1501
Atlanta, Georgia 30303
U.S.A.
Tel.: (404) 581-0488
Telex: 0054-2689 (Gov Que Atl)

Boston

Délégation du Québec
Exchange Place, 19th Floor
53 State Street
Boston, Massachusetts 02109
U.S.A.
Tel.: (617) 723-3366
Telex: 00940-683
Fax : (617) 723-3659
Model: Rapicom 120

Chicago

Délégation du Québec
35 East Walker Drive
Suite 2052
Chicago, Illinois 60601
U.S.A.
Tel.: (312) 726-0681
Telex: 0050-1033 (Que Gov Cgo)

Lafayette

Bureau du Québec
303 West Vermillion Street
Lafayette, Louisiana 70501
U.S.A.
Tel.: (318) 232-8080
Telex: 0098-9332 (Que Gov Lfy)

Los Angeles

Délégation du Québec
700 South Flower Street
Suite 1520
Los Angeles, California 90017
U.S.A.
Tel.: (213) 689-4861
Telex: 0067-7620 (Quela Lsa)

New York

Délégation générale du Québec
Rockefeller Center
17 West 50th Street
New York, New York 10020-2201
U.S.A.
Tel.: (212) 397-0200
Telex: 0012-6405 (Que Govt NYK)
Fax: 1-212-757-4753

Washington

Bureau du Québec
Service du tourisme
1300 - 19th Street N.W.
Suite 220
Washington, D.C. 20036
U.S.A.
Tel.: (202) 659-8990
Telex: 0089-2731 (Que WSH)

Latin America

Bogota

Bureau du Québec
Service économique
Edificio Profinanzas
Carrera 505, Piso 5
Bogota
Colombia
Tel.: 9-011-57-1-255-6628
255-6531
211-7232
Telex: 42369 (GO GBC CO)

Buenos Aires

Bureau du Québec
Service d'immigration
c/o the Canadian Embassy
Suipacha 1111, Pico 25
1368, Buenos Aires
Argentina
Tel.: 9-011-54-1-319081 (82 A 88)
Telex: 3321383 (Air Canada)

Caracas

Bureau du Québec
Edificio Aba, 4E
Apartado 2730
Caracas 1010A
Venezuela
Tel.: 9-011-582-913831
Telex: 3123491 (Oriveca)

Mexico City

Délégation générale du Québec
Avenida Taine 411
Colonia Bosques de Chapultepec
11580 Mexico D.F.
Mexico
Tel.: 1-905-250-2808/1-905-254-4282
Telex: 221-776443 (DelQmc)

Shipping Address:

Délégation du Québec
c/o the Canadian Embassy
Calle Shiller 529
Colonia Polanco
11560 Mexico D.F.
Mexico

Port-au-Prince

Bureau du Québec
Service d'immigration
13, rue Banssan, B.P. 2243
Port-au-Prince
Haiti, W.I.
Tel.: 011-509-1-5-3102
Telex: 203 280 (Delgrap)

Asia

Bangkok

Bureau du Québec
Service d'immigration
c/o the Canadian Embassy
Boonmitr Building, 12th Floor
138 Silom Road, Bangkok 10500
Thailand
Tel.: 234-1561 234-1568 extension 71
(by international telephone)
Telex: 82671 (Domca)

Postal Address:

Bureau du Québec
c/o the Canadian Embassy
P.O. Box 2090
Bangkok
Thailand

Hong Kong

Délégation du Québec
Admiralty Center, Tower 1
Suite 1716
18 Harcourt Road
Hong Kong
Tel.: 9-011-852-5-285071 (general number)
5-291126 (immigration service)

Singapore

Bureau du Québec
105 Cecil Street, No 12-02
The Octagon
Singapore 0106
Tel.: 9-011-65-225-1411 (3 lines)
Telex: Rs 42250 (Quesin)

Tokyo

Délégation du Québec
Kojiomachi Hiraoka Building
5th Floor
1-3 Kojimachi Chiyoda-Ku
Tokyo 102
Japan
Tel.: (03) 239-5137
Dax: (03) 239-5140
Telex: J23842 (Tokebec)

Europe

Brussels

Délégation générale du Québec
46, avenue des Arts
1040, Bruxelles
Belgique
Tel.: 9-011-322-512-0036
Telex: 4625276 (Quebru B)

Düsseldorf

Bureau du Québec
Service économique et
Service du Tourisme
Koningsallee 30, D4000
Dusseldorf
West Germany
Tel.: 9-011-49-211-32-0816
Telex: 418587659 (Qued D)

Lisbon

Bureau du Québec
c/o the Canadian Embassy
14-5 Praça Marques de Pombal
Lisbon Coodex 1298
Portugal
Tel.: 9-011-351-1-54-02-91

Use Customs Form C2/CP3
when sending parcels to this Bureau.

London

Délégation générale du Québec
59 Pall Mall
London SWIY 5JH
United Kingdom
Tel.: 9-011-441-930-8314
Telex: 51-261618 (Quelon g)

Milan

Bureau du Québec
Service économique
Via Piccinni No 2
Milan
Italy
Tel.: 9-011-39-2-208-204
Telex: 43-334163 (Quebmi)

Paris

Délégation du Québec
66, rue Pergolèse
Paris 75116
France
Tel.: 9-011-3314-502-1410
Telex: 42 620401 (Delebec Paris)

Rome

Délégation du Québec
Corso Trieste 16
Rome 00198
Italy
Tel.: 9-011-396-844-9032
Telex: 43 623068 (Quebroi)

Bureau du Québec
Service d'immigration
c/o the Canadian Embassy
30 Via Zara
Rome 00198
Italy

Stockholm

Bureau du Québec
Rema Kontorshotell Ab
Hantverkargatan 7
Box 22114
S-104 22 Stockholm
Sweden
Tel.: 9-011-46-8-520-720
Telex: 17041 (Rema s)

Appendix 6

Useful Telephone Numbers and Addresses

Offices of Industrial Research —
McGill University
Montreal
Inventions & Patents (514) 398-4201
Research Contracts (514) 398-4200

Bureau de valorisation des applications de la recherche (BVAR)
Université Laval, Québec
(418) 656-5378

Bureau de Normalisation du Québec
50, rue Saint-Joseph Est
Québec (QC)
G1K 3A5
(418) 643-5114

Standards Council of Canada (SCC)
Standards Information Center
350 Sparks St., Suite 1200
Ottawa, Ontario
K1P 6N7
1-800-267-8220

Centre de développement technologique de l'**Ecole polytechnique**
Montreal
(514) 340-4720

Center for Industrial Innovation of Montreal (CIIM)
6600 Côte des Neiges
Bureau 300
Montréal, (QC)
H3S 2A9
(514) 340-4647

Centre des technologies textiles
3000, rue Boullé
Saint-Hyacinthe (QC)
J2S 1H9
(514) 778-1870

Fashion Industry Development Center
550, Chabanel Ouest
Montréal, (QC)
H2N 2H8
(514) 384-9760

Centre de recherche industrielle du Québec (CRIQ)

In Quebec City:
Centre de recherche industrielle du Québec
333, rue Franquet
C.P. 9038
Sainte-Foy (QC)
(418) 659-1550

In Montreal:
Centre de recherche industrielle du Québec
8475, rue Christophe-Colomb
B.P.2000, Succursale Youville
Montréal (QC)
H2P 2X1
(514) 383-1550

Centre de recherche en sciences appliquées en alimentation de l'**Université du Québec**
Montreal
(514) 687-5010

Intellectual Property Directorate
Consumer and Corporate Affairs Canada
Place du Portage 1, 8e étage
50, rue Victoria
Hull (QC)
K1A 0C9
(819) 997-1936

Directions régionales du ministère de l'Industrie et du Commerce:

01. Lower St. Lawrence/Gaspé/ Magdalen Islands
Les Galeries G.P.
92, 2e Rue Ouest
Rimouski (QC)
G5L 8B3
(418) 722-3577

Bureau de New Carlisle
51, rue Notre-Dame
New Carlisle (Qc)
G0C 1Z0
(418) 752-2229

02. Saguenay/Lac-Saint-Jean
Edifice Marguerite-Belley
3950, boul. Harvey, 1er étage
Jonquière (QC)
G7X 8L6
(418) 547-9336

03. Québec
Complexe de la Place Jacques-Cartier
320, rue Saint-Joseph est
Bureau 201
Québec, G1K 8G5
(418) 643-8993

Bureau de Beauce
11535, 1re Avenue, bureau 504
Saint-Georges, Beauce (QC)
G5Y 2C7
(418) 228-9537

Bureau de Montmagny
68, rue du Palais-de-Justice
Montmagny (QC)
G5V 1P5
(418) 248-3331

04. St-Maurice/Bois-Francs
Edifice Capitanal
100, rue Laviolette, 3e étage
Trois-Rivières (QC)
G9A 5S9
(819) 379-6776

Bureau de Victoriaville
Edifice provincial
62, rue St-Jean-Baptiste
Victoriaville (QC)
G6P 4E3
(819) 752-9781

05. Eastern Townships
740, rue Galt Ouest, bureau 303
Sherbrooke (QC)
J1H 1Z3
(819) 565-0205

06a. Montréal-Laval
770, rue Sherbrooke Ouest
7e étage
Montréal (QC)
H3A 1G1

Bureau de Laval
1435, boul. St-Martin Ouest
Bureau 505
Laval (QC)
H7S 2C6
(514) 668-6535

06b. Laurentians-Lanaudière
Edifice administratif
85, rue De Martigny Ouest
Bureau 3.7
Saint-Jérôme (QC)
J7Y 3R8
(514) 436-6331

06c. Montérégie
Edifice Montval
201, place Charles-Lemoyne
Bureau 104
Longueuil (QC)
J4K 2T5
(514) 651-8011

07. Outaouais
Place du Centre
Edifice Jos-Monferrand
170, rue de l'Hôtel-de-Ville,
6e étage
Hull (QC)
J8X 4C2
(819) 771-6239

08. Abitibi-Témiscamingue
180, boul. Rideau, bureau 220
Noranda (QC)
J9X 1N9
(819) 762-0865

09. North Shore
10. New-Quebec
Centre commercial Laflèche
625, boul. Laflèche
Baie-Comeau (QC)
G5C 1C5
(418) 589-5715

Fondation québécoise d'éducation économique (CIREE)
(514) 282-7700

Industrie Information (CRIQ)

– Quebec City area	659-1558
– Montreal area	383-4240
– Elsewhere in Quebec	1-800-463-3390

Institut de génie des matériaux (IGM)
75, boul. de Mortagne
Boucherville (QC)
J4B 6Y4

Institut national de recherche scientifique (INRS)
(418) 654-2500

Invention Québec
4101, rue Jarry Est
Montréal (QC)
H1Z 2H4
(514) 728-4561

Industrial Research Assistance Programs (IRAP) (CNRC); information available in the following cities:

– Montreal	(514) 283-8231
– Quebec	(418) 648-3419
– Chicoutimi	(418) 545-5512
– Rimouski	(418) 722-3155

Service d'information économique
Centre d'entreprises
Faculté d'administration
Université de Sherbrooke
(819) 565-3479

For more information about trade shows, exhibitions and trade missions

Gouvernement du Québec
Ministère du Commerce extérieur et du Développement technologique
Direction générale des opérations promotionnelles
770, rue Sherbrooke Ouest
Montréal (QC)
H3A 1G1
(514) 873-2862

Government of Canada
Department of External Affairs
Export Development Program
Tour de la Bourse
800, Place Victoria, 37e étage, C.P. 247
Montréal (QC)
H4Z 1E8

Appendix 7

Conférence PME — May 28, 1987

Summary of Conference Proceedings

The Conférence PME 87 held last May 28 was one of the many objectives set by the ministre délégué aux PME, André Vallerand, following his appointment in December 1985. The Minister began with a vast round of consultations with owners and managers of small and medium-sized businesses, which made it possible to pinpoint the major problems confronting this sector. A second undertaking translated into the publication of a report entitled "Les PME au Québec: Etat de la situation", which served to complete the statistical profile of small and medium-sized businesses (SMB) and to assess their economic and social contribution. The purpose of the Conférence PME 87 was to introduce a draft policy on the support and promotion of SMB, which was born out of the thoughts and opinions generated by the previous measures taken by the Minister. It was also an opportunity to introduce the representatives of SMB to the means that could be implemented to achieve this policy, to provoke a reaction, to establish a consensus and inspire government action.

1 - Welcoming of Participants and Introduction of the ministre délégué aux PME

Claude Beauchamps, President and Publisher of the newspaper "Les Affaires", chaired the Conference. After welcoming the participants, he reviewed the rules of order that would guide the day's proceedings and then turned the floor over to the ministre délégué aux PME, André Vallerand.

On his own behalf and on behalf of the government, Mr. Vallerand thanked the participants for attending this first official meeting between the representatives of SMB and the government. He reviewed the objectives he had set himself following his appointment in December 1985. He then noted that the document "Les PME au Québec: Etat de la situation" had helped, among other things, categorize the problems plaguing the entrepreneurial sector in Quebec according to two types of responsibilities, namely those of the company, where solutions require initiative and self-discipline on the part of the owners/managers of the company, and the others which apply to the government instead.

The draft policy for the support and promotion of small and medium-sized business (SMB) is designed to help these companies solve the problems they encounter. To solve problems pertaining to government responsibility, the draft policy provides for the implementation of means destined to tighten the management of documents, streamline the laws and regulations governing business, and develop a single access point for government services.

The administrative structure provided to execute this mandate should be light, flexible, effective, inspiring and non-coercive, and should not create a new government department.

2 - Presentation of Draft Government Policy and Discussion of Major Topics

The roundtable discussion that followed the Minister's presentation yielded a consensus among the participants regarding the very principle of a policy of support for SMB, that would reduce the regulations and administrative paperwork and allow representative organizations to participate more in the development of new regulations. Nevertheless, many participants expressed reservations about establishing a new bureaucracy instead of a lighter, more flexible structure. A consensus was also achieved regarding more specific points such as the lack of statistical data and the development of a single access point for government services to business, and particular problems regarding subcontracting to companies with fewer than 20 employees and the start-up of small businesses were raised by a few participants, without any consensus being reached however.

First Topic of Discussion

Management of Documents

At the request of the participants, the agenda was modified in order to begin with a discussion of the measures advocated for improving the management of documents, before broaching the issue of the control of legislation and regulations.

The Minister's motions included assuming responsibility for:

- the review and approval of all forms, questionnaires and surveys destined for small and medium-sized business, and the issuing of a visa for a limited period.

- implementation of a procedure (in order to avoid duplication of requests for information, as well useless and complex forms), of a uniform vocabulary, and the systematization of formats.

The participants consider the many questionnaires and forms to be a major limitation to the expansion or creation of SMB, principally because of their unwieldiness. The consensus of the Assembly was that priority should be assigned to reducing government paperwork, preferably according to an incentive formula in which the ministre délégué aux PME would be responsible for making the various departments aware of the importance of improving their document management. The ministre délégué aux PME would also be in charge of accelerating the exchange of information between the various government departments and organizations. The participants therefore expect the ministre délégué aux PME to play a coordinating role with respect to document management.

A consensus regarding the means provides that:

the ministre délégué aux PME be invested with the responsibility

- **of organizing or coordinating the organization, within the government, of intra-departmental committees to review the documentation of each government department in decentralized fashion. These committees could include people from the small and medium-sized business sector to ensure that the review benefits from their experience. The first task of these committees could translate into an inventory of the documentation directed at businesses.**

- **of trying to eliminate duplication by ensuring that information available from one department is not the subject of other requests for information from other departments.**

- **ensuring as much coordination with the Federal Government as possible.**

Second Topic of Discussion

Legislation and Regulations

Legislation and regulations have been identified as one of the major causes of problems in the growth of SMB. The ministre délégué aux PME, in his draft policy, expressed the intention of introducing measures designed to make legislation and regulation more flexible. The Minister specified that the point is not necessarily to legislate less but to legislate better. Thus, the idea is not to oppose a legitimate bill but to make sure that it is expressed through regulations that do not upset the functioning of a business. Mr. Vallerand nevertheless pointed out that there will always be exceptions, for instance the safeguarding of the language or the environment. According to the Minister, this objective of cleaning up and streamlining the legislation and regulations would be coordinated with his colleagues in the Cabinet, taking an incentive approach via a light, flexible structure.

A consensus was quickly achieved on this principle. The participants pointed out that these measures should extend to all companies, not just SMB. What is more, the focus was on the need to select a process that would include the expertise of those working in the field.

To make sure that the legislation and regulations are cleaned up and made more flexible, the Minister is planning to introduce five measures for which he would assume responsibility.

First measure: Planning the legislation and regulations by publishing a twice yearly schedule of bills and draft regulations governing SMB.

The consensus focused on the importance and utility of a schedule so that companies can evaluate the need for any intervention on their part, and judge the relevance of the means being advocated.

While a consensus was reached regarding the Minister's proposal, the participants noted the following points:

- **the schedule should not only include the legislation and regulations governing small and medium-sized business but should extend to those governing all companies.**
- **the schedule should not be a mere parliamentary calendar but should include the texts of the bills or draft regulations, or at least a precise and detailed outline of the objectives, in clear understandable language.**
- **the schedule should include the laws and regulations issued by government departments, government regulatory agencies and government-owned corporations.**

The Minister will attempt to have a similar procedure approved by the municipalities.

Second measure: The adoption of a sunset clause in the laws and regulations decreed in future, in laws and regulations that may affect the growth of SMB in some way.

A consensus was reached regarding this measure, including extending it to the laws and regulations governing all business, not merely SMB. A law was proposed that would impose the sunset clause on all laws and all regulations, except where justified and, if applicable, a justification would have to be published in the Official Gazette to enable concerned individuals to express their views.

Third measure: To ensure that all departments and agencies produce economic impact studies on the bills and draft regulations submitted to Cabinet.

The consensus focused on the petition filed with the ministre délégué aux PME to sponsor a bill before the National Assembly that would require that ministers, presidents of government agencies, and presidents of state-owned corporations be responsible for the execution and publication of a study on the direct and indirect impact

(on business) of any bill or regulation they plan to pass and that will affect business.

Fourth measure: To ensure that the draft regulations governing SMB respect the spirit of the law by virtue of which they have been tabled. According to the Minister, there is a dichotomy between the legislative process and the regulatory process, meaning that the legislative and regulatory account has become overloaded. Participants agreed that it was important to ensure that the regulations coincide perfectly with the legislation, not only with respect to SMB, but for companies of all sizes.

The consensus therefore focused on the proposed measure, as formulated above and submitted in the draft policy.

Fifth measure: To establish a schedule for revising the laws and regulations currently governing SMB.

On condition that the motion be broadened to encompass all companies, the consensus was to approve the motion as formulated.

The Minister specified that the standards that will guide this action will be the legislation and regulations with the broadest impact on business. The effectiveness of this measure will depend on the structure implemented to fulfill this task. His action will however serve as an incentive and will aim to make each minister aware of the negative consequences of a law or regulation for business.

Third Topic of Discussion:

Information

From the standpoint of improving the exchange of information between the owners/managers of small and medium-sized businesses and the government, the ministre délégué aux PME proposed:

- the development of a single access point for the exchange of information between the owners/managers of SMB and the government;
- the creation of a data bank on SMB in Quebec;
- the publication of an annual report.

First Measure: A Single Access Point

The focal point of this motion, the single access point, will be the mutual exchange of information, namely the transmission of information to SMB regarding various government programs, and the explanation of existing laws and regulations, while the ministre délégué aux PME serves as the primary intermediary between SMB and the rest of government.

After the first round of discussion, the Minister noted that the principle of a single access point should be compared to a switching centre the responsibility for which is incumbent on the ministre délégué aux PME, although in conjunction with all the other departments.

The first consensus translated into a motion according to which the ministre délégué aux PME would be responsible for setting up a single access point that would serve as intermediary between the owners/managers of SMB and the government, using existing structures both inside and outside the government system. The ministre délégué aux PME could also, at a later consultation stage with everyone involved, propose tangible mechanisms for making this notion of a single access point operational.

Second Measure: Data Bank

A second consensus focused on the constitution of a data bank on SMB in Quebec, built from existing questionnaires and forms as well as from new data compiled for this purpose. This measure was considered essential by all participants, as it will facilitate the formulation of policies regarding SMB.

Third Measure: Annual Report

A consensus was also reached regarding the relevance of publishing an annual report of a prospective nature, including among other things a schedule outlining the actions taken by the ministre délégué aux PME with regard to the management of documents and the streamlining of legislation and regulations.

Fourth Topic of Discussion

Promoting the Interests of SMB

The final item on the agenda, the discussion essentially covered the role of promoter to be played by the ministre délégué aux PME, as well as the issues that could possibly become priorities in this regard.

Based on the consultations carried out by the Minister and the research involved in writing the report "Les PME au Québec: État de la situation", six topics of discussion were proposed to the Assembly; these were: tools and assistance for prospecting on external markets, technological transfers, participative management, the availability of skilled labour, occupational health and safety, and incubators for business.

Before the Assembly began its deliberations, Mr. Vallerand insisted on setting the record straight and defining the role that a ministre délégué aux PME might possibly play as promoter of the interests of SMB. This task of promotion is essentially a coordinating role in which the ministre délégué aux PME, working in conjunction with another minister, would examine the means of adapting government assistance to suit the size of the SMB. The Minister's activities would essentially involve consultation and representating the interests of SMB, without necessarily infringing on the activities of other departments.

For instance, the Minister cited the case of external trade. Thus, when the ministre délégué aux PME talks about external markets, he is not attempting to supplant his colleague at the Ministère du Commerce extérieur et du Développement technologique; he is simply underscoring the fact that SMB account for 5% of Quebec's exports. The deliberations of the Assembly yielded to the following consensus:

That the ministre délégué aux PME should make himself the promoter of the interests of SMB both inside and outside the government. As for setting priorities, the Minister will draw his inspiration from the guidelines proposed during the discussions.

While a real consensus regarding priorities was not achieved, the following topics were discussed:

- **Technological transfers:**
  the issue of technological transfer aroused the particular interest of the participants. The new tax incentives aimed at, among other things, increased cooperation between the universities and companies were well received, and incentive measures were suggested for the start-up of very small businesses in order to promote the development of new products (cf. U.S. studies).

- **External markets:**
  this issue also won the approval of many participants and certain avenues of activity were suggested, including better knowledge of the foreign economic climate, enhanced promotion of Quebec products abroad, improved means of publicizing export procedures, encouragement for participation in international trade shows, political support in negotiations with other countries, and more public information about export regulations. Free trade is an issue of special concern for SMB in Quebec and will have to be tracked with care.

- **Participative management:**
  although the owners/managers of SMB are not all in favour of this form of management, the topic deserves special attention, notably with respect to the development of specific incentive measures.

- **Skilled labour:**
  this subject is of concern to SMB and the participants pointed out that relevant training geared to the needs of SMB would relieve them of a function that should not normally devolve upon them.

The following topics were also discussed by the participants:

- **occupational health and safety and the labour laws;**

- **incubators of business;**

- **incentives for the creation of new companies;**

- **business financing for projects under $100,000;**

- **taxation.**

3 - Closing Address by the Minister

In conclusion, the ministre délégué aux PME reviewed the various consensuses that were achieved and which are enumerated above.

Other Bibliographical References

ROYAL BANK, L'achat d'une franchise: guide pour les dirigeants de petites et moyennes entreprises, 1987, 16p. (Collection "Vos affaires")

CARON, L., GAUTHIER, J. and LEBLANC, P., Répertoire des franchiseurs (Québec) 86, Institut national sur le franchisage, Montréal, 1986, 178 p.

CENTRE D'ETUDES EN ADMINISTRATION INTERNATIONALE, Problèmes juridiques de transfert de technologie, Ecole des hautes études commerciales, Montréal 1979, 491 p.

MONTREAL URBAN COMMUNITY, Vers une stratégie pour le développement des sociétés de haute technologie sur le territoire de la Communauté urbaine de Montréal, Montréal, 1984, 37 p.

ECONOMIC COUNCIL OF CANADA, Innovation, emplois, adaptations: rapport de recherche, Ottawa, Supply and Services Canada, 1987, 216 p.

CONSULTASIA, Guide des transferts technologiques en République populaire de Chine, Montréal, 1984, 44 p.

DURANCEAU, J., Ebauche de politiques et procédures sur le transfert technologique des résultats de travaux de R-D de l'Université Laval, 1979.

DUSCLAUD, M. AND SOUBEYROL, J., Enjeux technologiques et relations internationales, Paris, Economica, 1986, 423 p.

ECONOSULT INC., Etude sur les accords de transfert technologique: rapport final, Sainte-Foy, Centre de recherche industrielle du Québec, 1981.

ENROS, P.C. and FARLEY, M.R., Les services universitaires de valorisation industrielle de la recherche, Science Council of Canada, 1986, 77.p

GAGNON, J.H., Développer votre entreprise par le franchisage, Agence d'Arc inc. (Les éditions), 1984, 220 p.

-------, Comment acheter une franchise: guide du futur franchisé, Agence d'Arc inc. (Les éditions), 1984, 152 p.

HORWITCH, M., "Les nouvelles stratégies technologiques des entreprises", Revue française de gestion, March-April-May, 1986, pp. 157-174.

HOSTE, Y., Gestion de l'information en milieu industriel: vision d'aujourd'hui, réalité de demain, DMR et Associés ltée, for DRIE, December 1985, 73 p.

JULIEN, P.A., "L'impact des nouvelles technologies sur l'économie québecoise", Interface, November-December 1986, pp. 10-18.

JULIEN, P.A. and HEBERT, L., Le rythme de pénétration des nouvelles technologies dans les PME manufacturières québécoises, Université du Québec à Trois-Rivières, September 1985, 25 p.

LEFEBVRE, L.A., LEFEBVRE, E. and DUCHARME, J., L'introduction et l'utilisation de l'informatique dans les petites entreprises: étude des perspectives et des attentes de leurs dirigeants, Communications Canada, February 1987, 92 p.

MINISTERE DU COMMERCE EXTERIEUR, Accords industriels, Government of Quebec, 1985, 41 p.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION, La fourniture ou l'acquisition de technologie: un guide à l'intention du milieu canadien des affaires pour la structuration et la négociation des accords de transfert de technologie, Ottawa, 1986, 76 p.

NICAISE, J.-P., "Franchises: comment dénicher une bonne affaire", Le Magazine Affaires +, April 1987, pp 24-44.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD) Le transfert de technologie aux petites industries, Paris, 1974, 256 p.

------, Enjeux des transferts de technologie Nord/Sud, Paris, 1981, 127 p.

OZAWA, T., International Transfer of Technology by Japan's Small and Medium Enterprises in Developing Countries, UNCTAD Secretariat, Geneva, 1985, 82 p.

PERRIN, J., Les transferts de technologie, Paris, La Découverte/-Maspéro, 1983, 117 p.

SEURAT, S., Réalités du transfert de technologie, 2nd edition, New York, Masson, 1978, 239 p.

--------- "Franchising and Small Business", Financial Times, June 1, 1987, pp. A1-A16.

--------- The Promotion of the Relationship Between Research and Industry in Mechanical Production, Toronto, Pergamon Press, 1970, 59 p.

--------- "Report on Small Business and Franchising" The Globe and Mail, May 29, 1987, pp. C1-C12.